MODEL RAILWAY NEWS

1'6

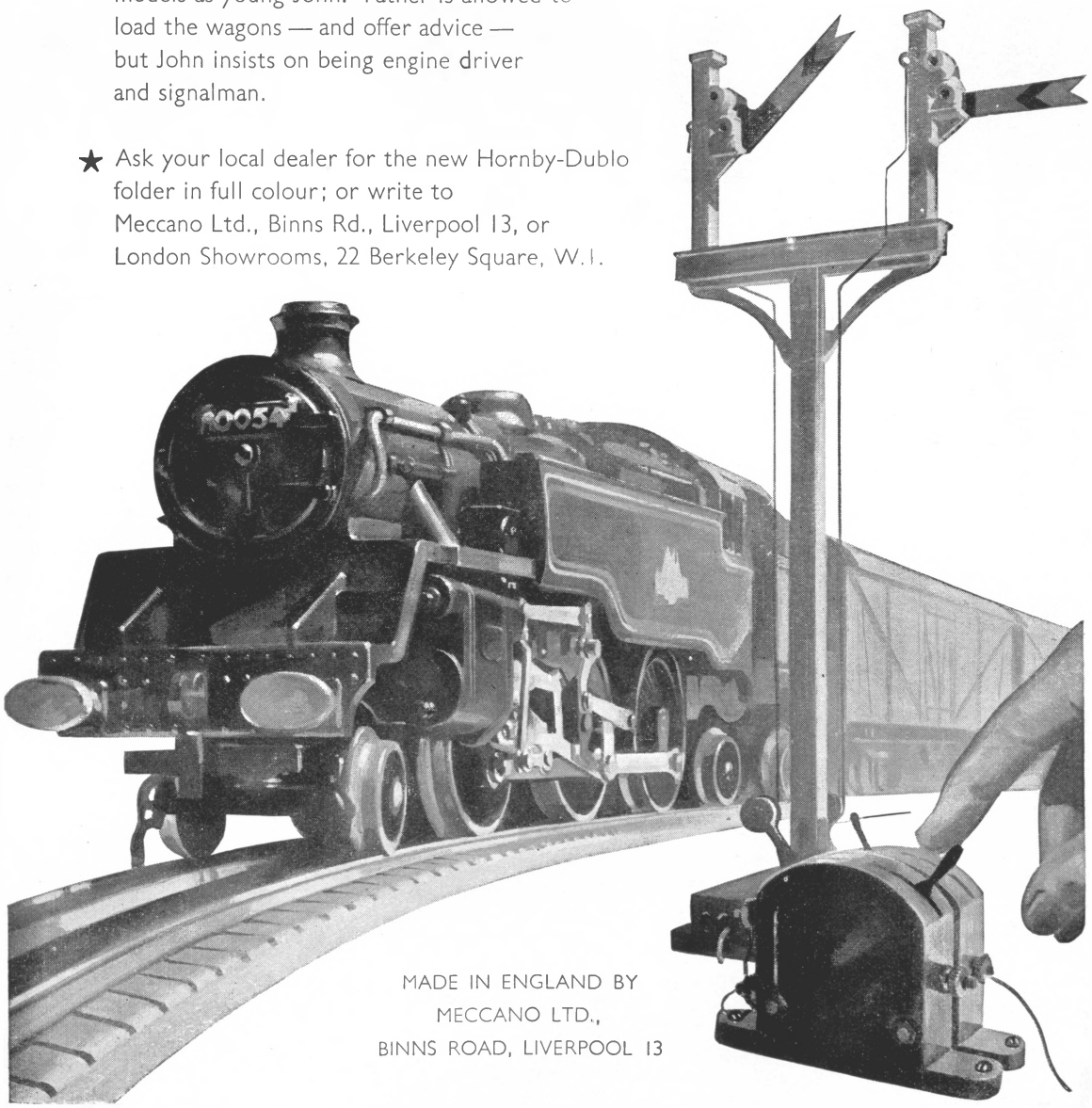
DECEMBER 1956

This is the goods!

HORNBY DUBLO ELECTRIC TRAINS

This wonderful electric train set was a very special present from Father who is just as thrilled with the beautiful scale models as young John. Father is allowed to load the wagons — and offer advice — but John insists on being engine driver and signalman.

★ Ask your local dealer for the new Hornby-Dublo folder in full colour; or write to Meccano Ltd., Binns Rd., Liverpool 13, or London Showrooms, 22 Berkeley Square, W.1.



MADE IN ENGLAND BY
MECCANO LTD.,
BINNS ROAD, LIVERPOOL 13

Please say you saw it in MODEL RAILWAY NEWS

Suggestions for presents . . .

HORNBY DUBLO
COMPLETE TRAIN SET WITH MAINS UNIT ... £8 5 0
TRI-ANG
COMPLETE TRAIN SET WITH MAINS UNIT ... £6 6 6
TRI-ANG OPERATING ROYAL MAIL COACH SET £1 5 6
AMERICAN TYPE MAIL COACH £1 7 0
TRI-ANG TURNTABLE £3 15 0

POWER UNITS

HORNBY A2 ...	52/6	H & M MINOR ...	54/-
HORNBY A3 ...	97/6	H & M MINOR de luxe	66/-
HUB Mk. III	57/6	KIRDON MINOR ...	45/-
HUB X	39/6	TRI-ANG	45/-

ETC.

BOOKS
IAN ALLAN ABC OF MODEL RAILWAYS 2/6
HOW TO WIRE A MODEL RAILWAY 15/-
(FULL SELECTION AT HARLESDEN)
THE NEW AND EXCITING HOBBY
FROG, REVELL, LINDBERG PLASTIC KITS.

LOCO CONVERSIONS
ALL THE PROPRIETARY MAKES CONVERTED FOR USE ON TRI-ANG TRACK, HORNBY DUBLO TRACK OR SCALE TRACK.

KITS
FULL RANGE OF CCW AND RATIO. PECO WONDERFUL WAGONS, SALT WAGON, 7/6; OPEN WAGON, 7/6. WOODSIDE "OO" BUILDINGS, SUPER DETAIL AND FINISH.

The above selection is a mere fraction of our entire range which covers every worth-while well known product: **PECO, WRENN, GEM, WELKUT, ROMFORD, X-ACTO, HORNBY, TRI-ANG, TRIX, MARKLIN, RIVAROSSI, MASTER MODELS, ANORMA, MODELCRAFT, FALLER, RATIO, CCW, REEVES, O-MY, H & M, KIRDON, JAMIESON, HAMBLINGS, NUCRO, DERMIC, S & B, BRITAINS, EXLEY, BILTEEZI, & CRESCENT.**

SPECIAL NOTE:—
Further supplies of Marklin available in the New Year. Watch out for new rolling stock, locos and track. (Please allow for postage on all orders and 2½d. stamp for enquiries.)

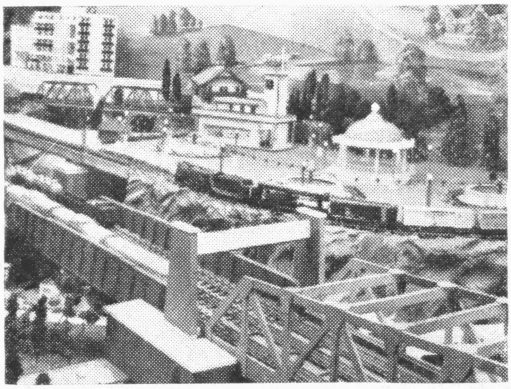
A Merry Christmas
and
A Happy New Year from

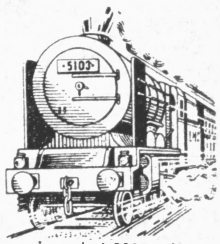
TAYLOR & McKENNA LTD.

98, CRAVEN PARK ROAD, HARLESDEN, N.W.10 TEL: ELGar 3573

GAMAGES

MAMMOTH WORKING MODEL RAILWAY





* THE LARGEST OF ITS KIND IN THE WORLD

TOO WONDERFUL to describe, TOO LARGE to photograph, this fabulous lay-out must be seen to be believed.

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Also in the same hall . . . a large Exhibit of MODEL ROADWAYS with Auto-Steering Electric Cars

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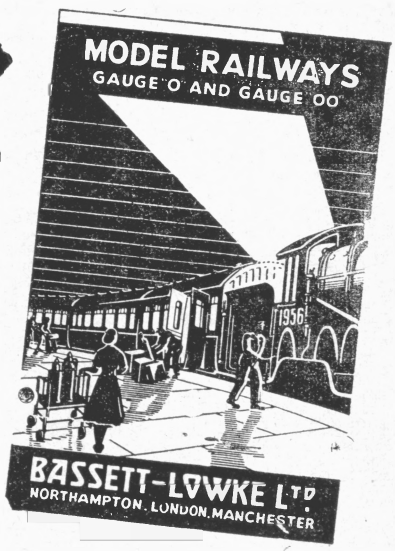

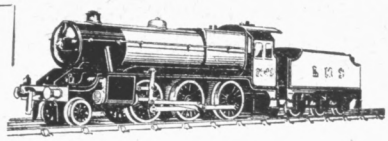

One of the many items appearing in this catalogue. This real live steam "Mogul" can be built from a complete set of parts in 30 hours. Supplied with fully illustrated construction book.

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Prompt and Experienced Service for both Postal and Personal Shoppers

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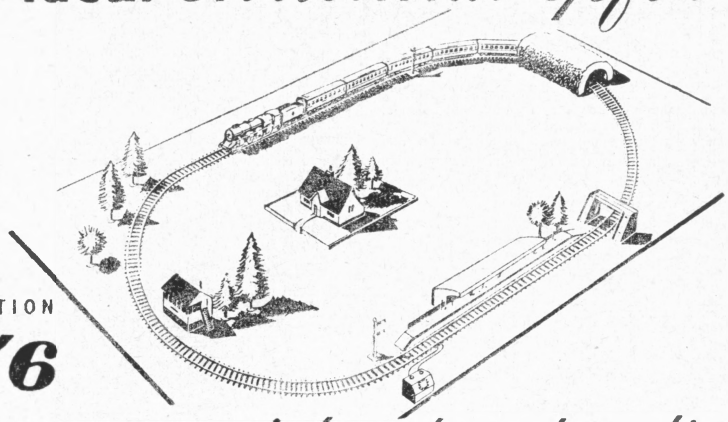
A complete

WRENN TRACK SET

PACKED FOR PRESENTATION

PRICE ONLY **27'6**



You can add even more interest and realism by using **WRENN** *Flexible* **TRACK** *with our*

BASEBOARD FRAME KIT

The Wrenn Track Set is beautifully packed for presentation and made in the finest Wrenn standard of Realism, Reliability and Durability.

The set can be extended with Wrenn Flexible Track enabling the modeller to increase size and interest whether you are a beginner or experienced modeller. To complete a really workmanlike job we are pleased to offer the Baseboard Frame Kit. Assembly is a simple matter and the kits are available in two sizes:

5 ft. × 3 ft., **27s. 6d.** 6 ft. × 4 ft., **35s.**

The Flexible track is supplied in 36 in. lengths.
Price 2 rail **4s. 8d.**, 3 rail **6s. 2d.**

Ask your retailer to show you the Wrenn range of Universal Products, or send a 1s. P.O. direct for sample of track and literature or 5d. in stamps for literature only.

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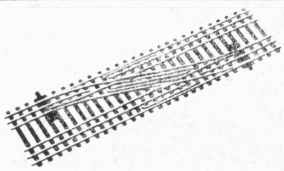
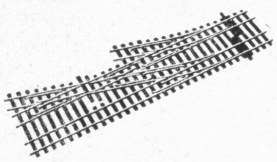
UNBREAKABLE TREES
A new foam plastic material has made possible the construction of a wonderful range of trees. They are unbreakable, inexpensive, realistic and well made.
Provided with a detachable rubber sucker base.
PRICE 1/- each.

UNIVERSAL CROSSOVER
Constructed to give a scale double track (6 ft. permanent way) it is particularly suitable for insertion just outside stations, adding realism and interest to even the smallest layout.
PRICE 2-rail **25/8**, 3-rail **28/7.**





UNIVERSAL DOUBLE JUNCTION
A much sought-after track formation and a first-class example of WRENN trackwork. Presented at an extremely moderate price, it will accept all types of locos and rolling stock.
Length 16½ in. Radius 24 in.
Price, 2-rail, **36/4**; 3-rail, **39/11.**

WRENN

HONYWOOD ROAD
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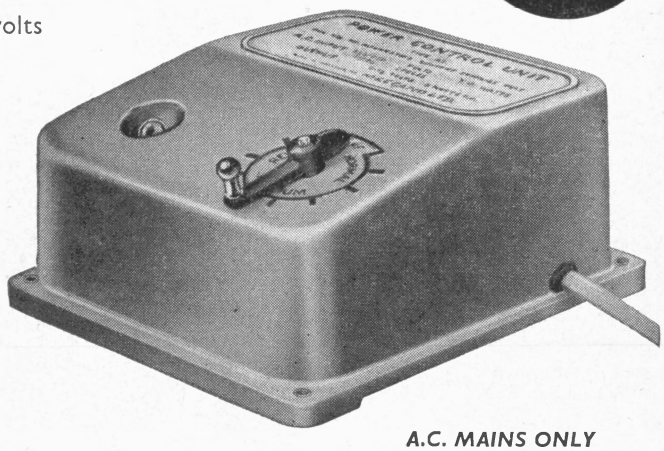
Items not illustrated include: Universal Straight Points, Universal Curved Points, Buffer Stops, Universal Switch Crossings, Ballast Strip, Adaptor Ramps, Uncouplers, Terminal Rails, Point Levers, Fishplates and Track Screws.

NEW A2 Power Control Unit 52/6

Connects direct to mains . . . 220/250 volts 50/80 cycles. Double-wound short-circuit-proof transformer. Absolutely safe . . . with overload warning lamp. Simple . . . single-handle operation giving positive control of direction at any speed. Virtually indestructible . . . die-cast case. Soundly constructed for long and reliable service. Suitable for A.C. Mains only.



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THE NEW FLEXIBLE TRACK WITH HEAVY SECTION RAIL * AND SCALE SIZE SLEEPERS
OO Gauge

The full range of GEM Products is described in our Illustrated Catalogue

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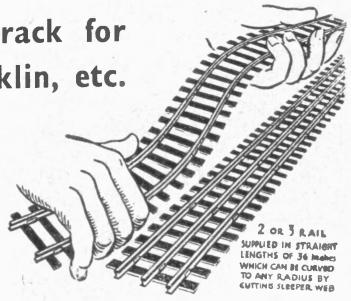
★ **The Ideal Universal Track for Dublo, Tri-ang, Trix, Marklin, etc.**



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Flexi-Trak per yd. ...	4/9	6/3
Universal Turnouts:		
2 ft. radius LH or RH ...	10/10	12/8
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READ THE NEW FLEXI-TRAK HANDBOOK "TRACK LAYING & WIRING SIMPLY EXPLAINED"

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FLEXIBLE LINESIDE FENCING adds the finishing touch to your layout, 12" lengths, 1/2½; 50", 4/2½.

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AT THE PRESENT TIME

Charles Oates uses Pecoway and Peco Wonderful Wagons when building the new Coombe Bissett Branch.

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A HAPPY XMAS

Ensured by giving Peco Presents—the delight of all enthusiasts from year to year. Peco Products are available in all price ranges, and some typical examples are—

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The Scale Flexible Assembled Permanent Way, available in types to suit all "OO" Systems. Track supplied in convenient 18-inch lengths. Points 3-ft. easy radius. All accessories available. Track per length, from **2/7**

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The 'Do-It-Yourself' Track components now incorporating the NEW Readi-flex Track Bases. Peco Spiked Track can be assembled by anyone in a matter of minutes. No soldering. Supplied in convenient Packs. Track from **4/-** per yard. Points from **7/6**

PECO WONDERFUL WAGONS

16 Colourful Private Owner Wagons to add fascinating variety to your Goods Trains. Simple and easy to assemble, incorporating actual *working* Axle-Box Springs and Buffers, Simplex Auto Couplings, Nylon Wheels. Kit is *absolutely complete*. No Painting. All at one price. Each **7/6**

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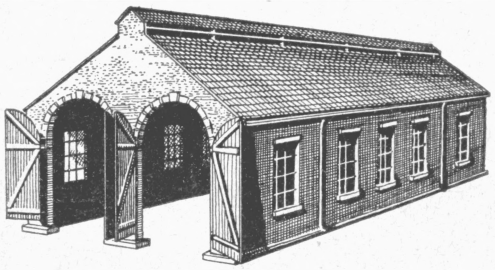

Above is an illustration of No. A31, Anorma Loco Shed. This is a fine model of a two track loco shed, capable of storing four tank locomotives. Price complete with all fittings, etc., including P.T., **8/5.**

A4	Country Station A ...	**12/-**	
A13	Country Station B ...	**10/9**	
A25	Country Goods Depot	**8/5**	
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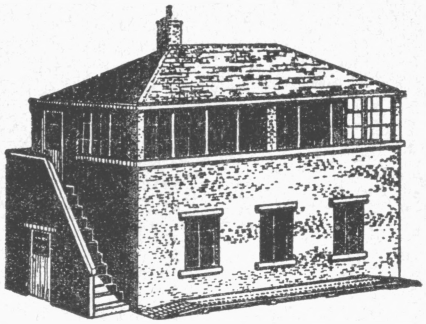
A24	Factory	**13/10**	
A33	Cafe and Bank ...	**6/7**	

Models built from Anorma Kits are true to scale and contain all shapes, accurately printed on selected wood of various thicknesses, with door, window locations, etc., printed in position. Ready moulded stairways are also included in the kits, and special features are the fully detailed scale plan and easy to follow, step by step, illustrated instructions.



Here is an illustration of a fully assembled Anorma Signal Cabin Kit, No. A5. Price of this kit including all parts and instructions, etc., **4/10** including P.T.

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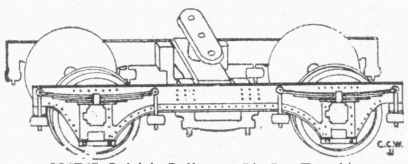
CCW

Please state if for use with Hornby Dublo.

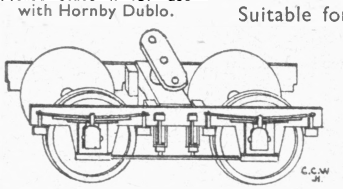
'00' BOGIES GALORE! '00'

The widest selection of Bogies ever offered for "OO" gauge Rolling Stock at such an exceptionally moderate price. Suitable for 2- or 3-rail operation.

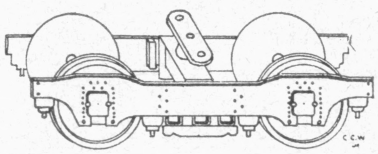
PRICE ONLY **6/-** inc. P.T. PAIR



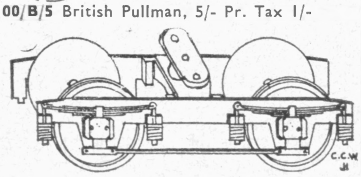
00/B/5 British Pullman, 5/- Pr. Tax 1/-



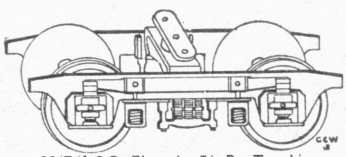
00/B/6 G.W.R. 7 ft , 5/- Pr. Tax 1/-



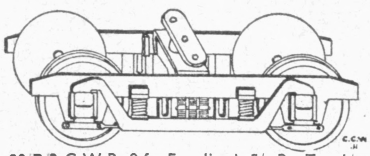
00/B/3 L.N.E.R. 8 ft. 6 in. Standard, 5/- Pr. Tax 1/-



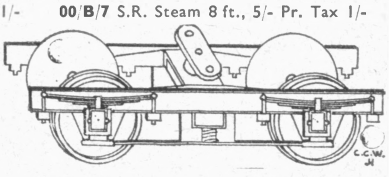
00/B/7 S.R. Steam 8 ft., 5/- Pr. Tax 1/-



00/B/1 S.R. Electric, 5/- Pr. Tax 1/-

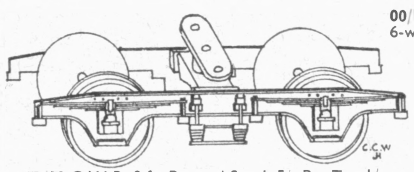


00/B/2 G.W.R. 9 ft. Equalized, 5/- Pr. Tax 1/-.



00/B/8 L.M.S. 9 ft. 4-wheel, 5/- Pr. Tax 1/-.

00/B/11 British Railways 8 ft. 6 in. 4-wheel Bogie, 5/-. Pr. Tax 1/-. OTHER BOGIES include 6-wheel, U.S. type, etc. Tax is NOT payable by OVERSEAS Customers.



00/B/10 G.W.R. 9 ft. Pressed Steel, 5/- Pr. Tax 1/-

WRITE TODAY for information. Please send 1/- (post free) for CCW (October) General Catalogue, 40 pages of Kits, Accessories, and information for "O," "OO" and "HO." For "O" gauge send also **6d.** (post free) for (October) "Scaloh" Supplement. All Catalogues FREE to OVERSEAS

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The HIT of the Show

Amazing success of the 1956 H & M SAFETY MINOR UNIT

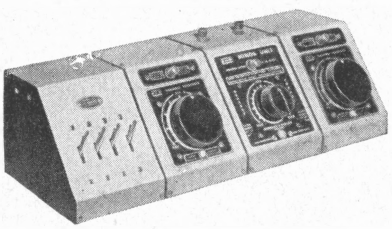
WITH——

G.R.C. (GRADED RESISTANCE CONTROL)!
SOCKETS FOR EXTRA CONTROLLERS!
THREE-CORE SAFETY MAINS LEADS!

SAFER AND BETTER THAN EVER

READ THIS OUTSTANDING SPECIFICATION

Combined Power and Control Unit supplying 12 volts D.C. at 1½ amps direct from 200-250 volts A.C. mains. With 16-volt A.C. output sockets on L.H. side and 12-volt D.C. output sockets on R.H. side in addition to normal output terminals. Single-knob Reversing Controller. Graded Resistance Control giving choice of High and Low resistances, suitable for all motors from 0.2 to 1 amp. Airflow Resistance for cool running and long life. Overload Cutout for maximum protection. Three-core mains lead and fully isolated Double-wound Transformer for perfect safety in use. Superb instrument-finished case. With the full H & M Guarantee.



UP TO 3 MOTORS!

Illustration shows how the 1956 "Safety" Minor may be coupled up to run three low-current motors plus solenoids at one and the same time! From left to right:—Flash-switch Unit for Solenoids· R.C.I. Rectifier/Controller; "Safety" Minor; and Multi-pack Controller.

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54/-

(Postage 2/-)

DE LUXE MINOR WITH VARIWAVE CONTROL 12/- EXTRA

MADE BY THE ONLY MANUFACTURERS SPECIALISING SOLELY IN ELECTRICAL CONTROL EQUIPMENT

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Send 3d. for New 1956/7 complete catalogue

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HANDEM HOUSE, 39 MASON'S AVENUE
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HORNBY DUBLO GUARANTEED BARGAINS

Delivery by return in perfect condition—E.D.G.17 0-6-2 tank sets, **£4/5/-**; E.D.G.18 2-6-4 tank sets, **£4/19/6**; 2-6-4 tank pass. sets, **£5/5/-**; "Silver King" sets, **£4/19/6**; "Duchess Montrose" sets, **£5/15/-**. For use with above sets—H/D transformers, **25/-**, plus H/D controllers, **35/-**, or H/D battery controllers, **22/6**, or new Kirdon Minor power units, **45/-**; B.R. 2-6-4 tanks, **55/-**; locos and tenders—B.R. "Silver Kings," **57/6**; B.R. "Duchess Montrose," **63/-**; N.E. (blue) "Sir Nigel Gresleys," **55/-**; L.M.S. (maroon) "Duchess Athols," **57/6**; rails, **2/6**; half rails, **1/6**; quarters, **1/3**; uncoupling, **3/6**; isolation, **1/6**; hand points, **7/6**; remote points, **15/-**; diamonds, **6/6** (postage 1/6); B.R. (E.R.) coaches, **7/6**.

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(Tri-ang conversions with H/D couplings and collectors.) 0-6-0 3F tanks, **50/-**; 0-6-0 saddle tanks, **50/-**; 0-6-0 diesel shunters, **50/-**; 2-6-2 B.R. tanks, **75/-**.

HORNBY GAUGE "O" BARGAINS

C/Work Train Sets—Tank goods, **37/6**; tank pass., **40/-**; 50 & 51 goods or pass. sets, **47/6**; rails, **6d.**; goods stock, **3/6** each; 20 volt trans-controllers, **30/-**.

GAIETY S/hand 2-rail G.W.R. 0-6-0 pannier tanks, **45/-**; B.R. 0-6-2 tanks, **37/6**.

Postage extra. S.A.E. with enquiries.

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Complete train sets including latest trans.-controller goods or passenger, **£6/17/6**; American switcher locos, **£3**; 4-4-0 "Hunt" class or compounds, perfect, **£4/15/-**; Continental 2-4-2 tanks (lights, as new), **£6**; B.R., L.M.S., N.E., express bogie coaches, **8/6**; rails, **1/6**; hand points, **12/6**; bogie wagons, **7/6**.

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For Wrenn, etc., tracks (H/Dublo conversions)—B.R. 2-6-4 tanks, **£4/10/-**; B.R. "Silver King" and tenders, **£4/17/6**; B.R. "Duchess Montrose" and tender, **£5/5/-**.

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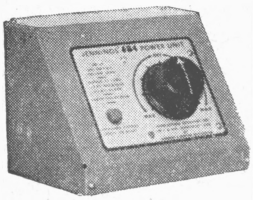

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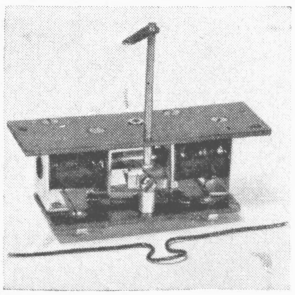

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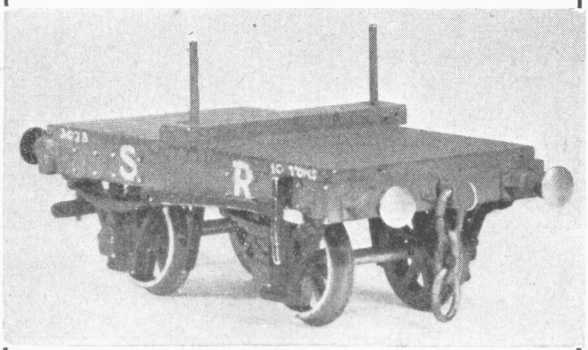

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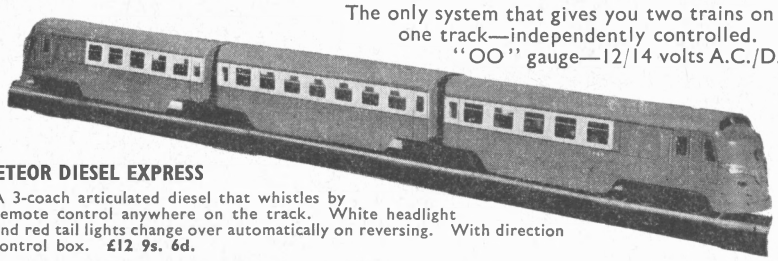

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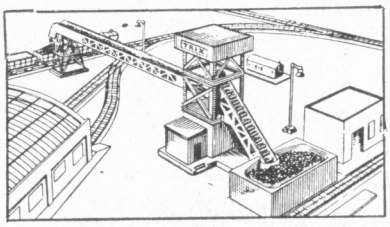

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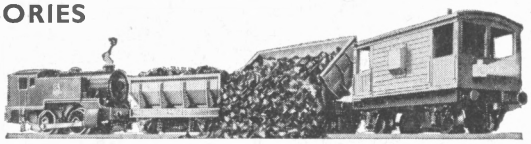

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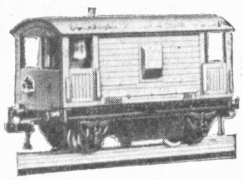

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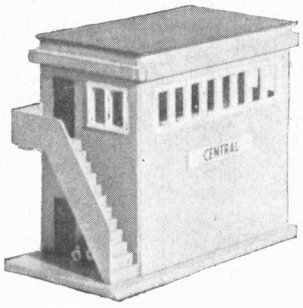

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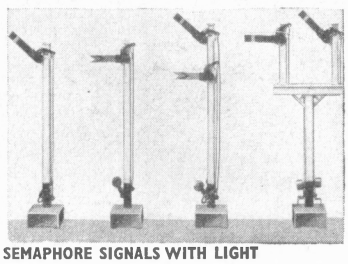

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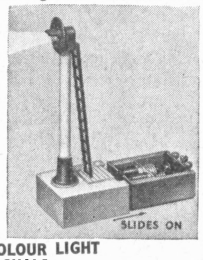

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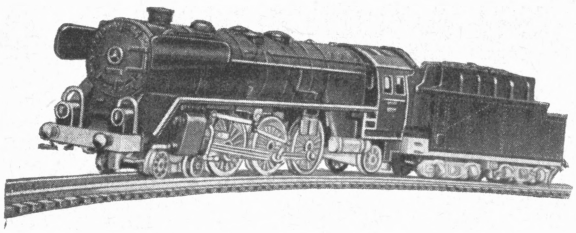

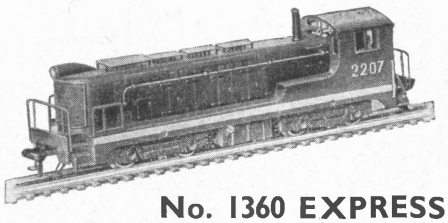

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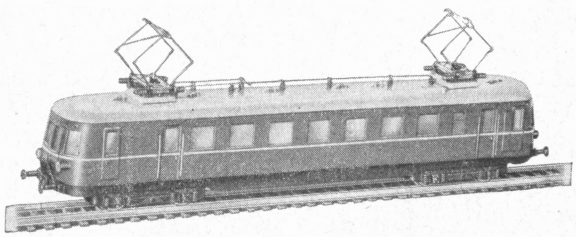

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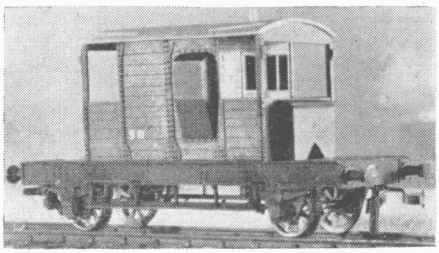

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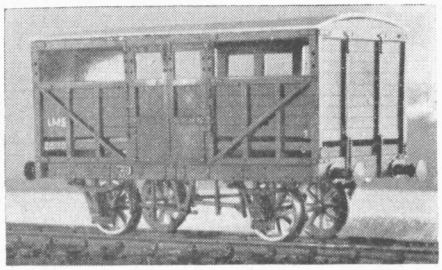

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DECEMBER 1956

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EDITORIAL

AS the year 1956 draws to a close, we can reflect that, as far as British Railways are concerned, the chief item of interest, of course, has been the incidence of the great 15-year plan of modernisation; so far, there has been a lot of talk about the plan, and there is not a great deal of visual evidence, as yet, that the realisation of the plan has been begun. Most of the talk seems to have been devoted to such matters as the effect of the plan on manpower, rather than on the far-reaching technical aspects.

The opening, by H.M. The Queen, of the colossal nuclear-powered generating station at Calder Hall directs attention to two important points: one is the part actually to be played by atomic energy in these new, ultra-modern power stations; the other is the dependence we are all to have, presumably, upon the supply of vast quantities of steam. The atomic energy is converted into heat for boiling water to produce the steam; thereafter the function of the station is practically identical with that of any steam-operated power station. In short, atomic energy is to be merely a substitute for fuel; in which case, the whole wasteful process between the release of the energy and its conversion into tractive force is to be retained. It does not look very much like Progress !

With the application of a new source of energy to the generation of tractive force, the fact that the elimination of modern methods of generation and transmission seems to have received no thought whatever is surprising. We have in mind the experience of British Railways in the Manchester-Sheffield electrification, a fabulously costly scheme; no sooner had it been completed than a new and cheaper system of electrification (Lancaster-Morecambe-Heysham) proved its worth, and is to be used for future railway electrification. Now that Calder Hall is operating, is history to repeat itself ? It might well do if someone came along with a practical scheme for releasing and converting atomic energy at the exact spot where it is wanted—the point of contact between wheels and rails. And what a boon it would be to the model railway hobby !

With best wishes for Christmas and the New Year from the M.R.N. Staff

This Clockwork Business

By John L. Ray

> "The time has come," the walrus said,
> "To talk of many things;
> Of gears and cogs and speed-controls—
> And whether tanks have springs——"

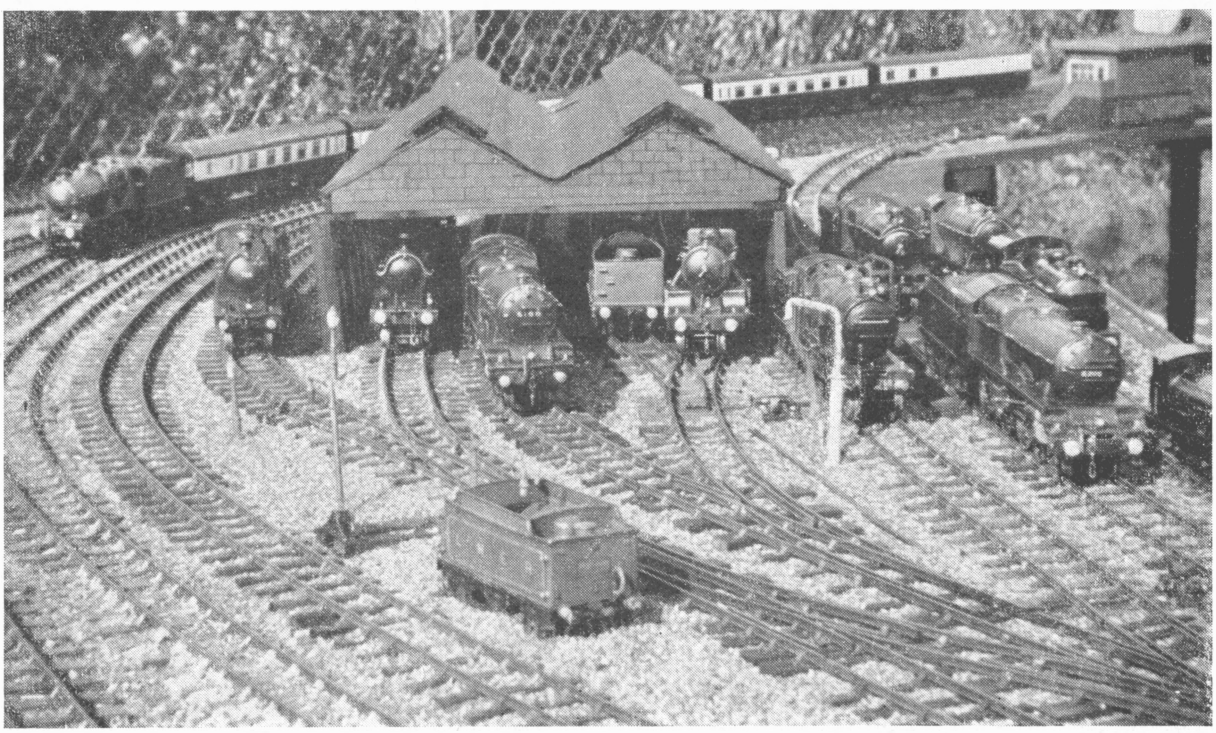
I HAVE nothing against prophets. The prophet is an amusing—and often a useful—figure in the life of any community, and although not without honour, save in his own country, he often has a stimulating effect, setting standards to be aspired to a little higher than they were. Having said which, let me deny any personal claim to prophecy, or to the moral courage of the fanatic. I am deplorably tolerant of the man who sees in railway modelling a different modus vivendi from my own, and who may approach the whole thing from a different viewpoint. There is within me no urge to write indignant letters to the Press upbraiding Mr. Belle-Cranke for stating that the N.E.S.W. Railway's (now obsolescent) Class "Z" loco had 367 rivets round the tender, when any fool (including presumably the writer) knows it only had 366. Yet I have the most healthy respect for the kind of mind which can cope with such detail.

Please, therefore, do not try to see in these paragraphs the outpourings of a zealous crusader seeking to bring the light to those whose views differ from his. Shall we agree that our hobby is governed by an attitude of mind? Can we concede the point that railway-modelling—be it fine-scale super-detail stuff, or tinplate toys—is something a man does to seek self-expression, to please himself, for his own recreation, and with no moral obligation to do either more or less than he feels inclined? If we can agree with this conception of the hobby the spirit in which this article is written will be better understood.

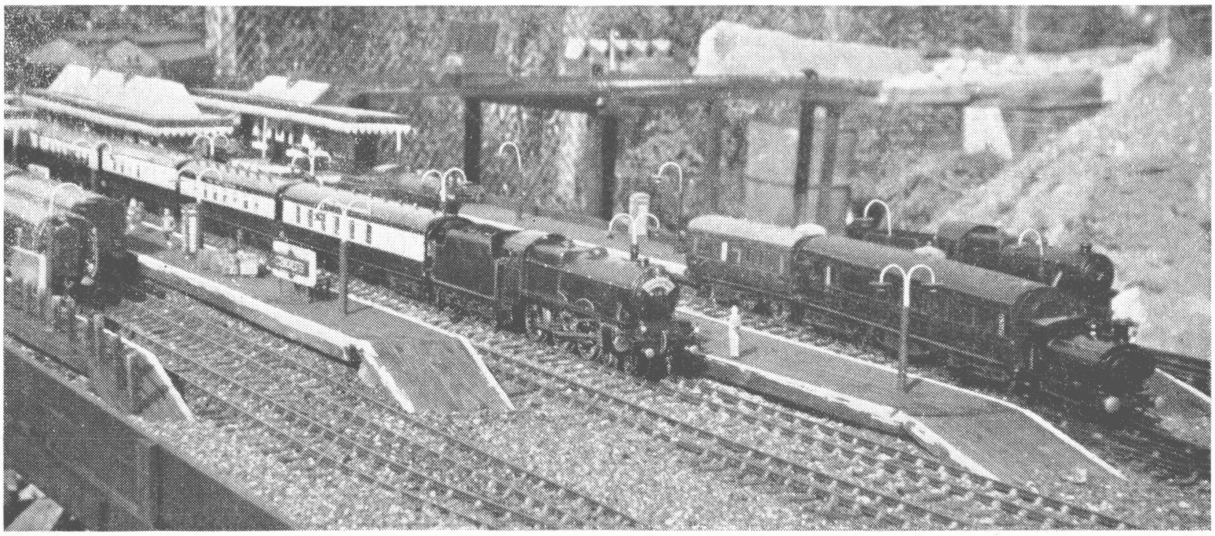
I want to look at the particular question of clockwork drive in gauge "O" as it may affect all modellers—hardened spring-drive addicts, newcomers, and the sparks-brigade. We shall not overcome the prejudice which exists in the minds of most people towards spring-drive by waving big banners inscribed "UNFAIR TO CLOCKWORK" or screaming "Down with electricity!" but rather by trying to understand just why the prejudice exists and seeing if something cannot be done about it. The infuriating comment so often heard "Only clockwork?" demonstrates how wide this feeling is—implying that the clockwork man is mentally retarded or has not progressed beyond the First Form.

During the first forty years of this century gauge "O" clockwork enjoyed its heyday, with many firms producing a good range of models, varying from toys to fair representations of known prototypes. It is useless to blame the trade for failing to maintain this range, for economic conditions have changed and, reading the writing on the wall, commercial producers have tended to concentrate more and more on electricity and "OO." But I do submit that not quite all the writing on the wall was correctly interpreted, and today conditions are changing again, justifying a reassessment of the situation. These recent developments may be very broadly summarised under the following headings:

(a) A growing number of people who prefer clockwork to any other form,



The veteran compound heading northbound express passes Crewchester motive power depot



No. 6100 arrives at Crewchester with the Down "Crewcastrian"

(b) The problem of TV interference,
(c) The great number of modellers who, although using electricity, would welcome one or two engines powered by spring-drive.

The main charge to be laid at the door of the trade is that as a whole they have never attempted to cater for anything but the toy-trade. There is (to my knowledge) no mechanism available today comparable in standards of engineering and craftsmanship with the average electric motor. The pre-war Walker-Fenn was a gallant attempt in the right direction, but was hopelessly over-scale. The Walker-Reimsdyk 0-6-0 post-war tank has now been discontinued owing to "lack of demand." Most of the letters I have received referring to this loco criticised its failure to represent any recognisable prototype, and to have insufficient length of run. But it must be admitted that this loco did a pretty job as a shunter or station-pilot.

Growing Interest

If the trade require proof of the growing interest in spring-drive, perhaps the following clues might lead them in the right direction. Two years ago it was possible to walk into any reputable dealer in second-hand locos and take your pick of a wide variety of engines at a most reasonable price. You try it today! Go into Walkers and Holtzapffel in London, Hatton's in Liverpool, Tyldesley and Holbrook in Manchester and they will all put you on their waiting-list. Watch the "small ads" in the Press and see how few clockwork engines there are for disposal and how the prices have hardened !

How does this affect you ? Let me answer my own question by putting another ; supposing some enterprising manufacturer produced a six-coupled tank engine, representing a definite prototype (never mind which just now), incorporating a governor giving variable speeds from 5 to 50 scale m.p.h. (I'll shoot the man who writes to me about "scale time"), would you not want at least one on your layout ?

There is on the fringe of this hobby a great army of potential modellers who are hovering on the brink, unwilling to commit themselves until they are satisfied that they have chosen the ideal medium for their own tastes. These are the people who, unless they have actually seen a proper clockwork layout being operated, are most likely to discount spring-drive without a full appraisal of its possibilities. It is a well-known axiom that beginners should start with something simple, capable of extension, and get something running as soon as possible. I would urge them to try and see a clockwork layout in operation, if only to prove how realistic it can be. Observe how smoothly the correctly loaded clockwork engine moves off and how consideration of gradients and loading can produce the most convincing scale-speeds, and how arrivals at given places may be accurately calculated. See the beautiful workmanship of Frank Shaw (who has been at it for over half a century, and he should know !), or the fantastic organisation and running of the Conway Railway at Harrow. See what Norman Eagles has done with his magnificent Sherwood Lines. If later on you feel you really prefer electricity—there is nothing to stop you installing it—and jolly good luck to you !

Many visitors to the Crewchester Line express astonishment at the realistic running we obtain, and though John Blair and I are human enough to enjoy such praise, there is nothing special about our railway. All the models are commercially produced, standard engines—well looked-after it is true—but with no magic formula to set them apart from any other clockwork-operated layout.

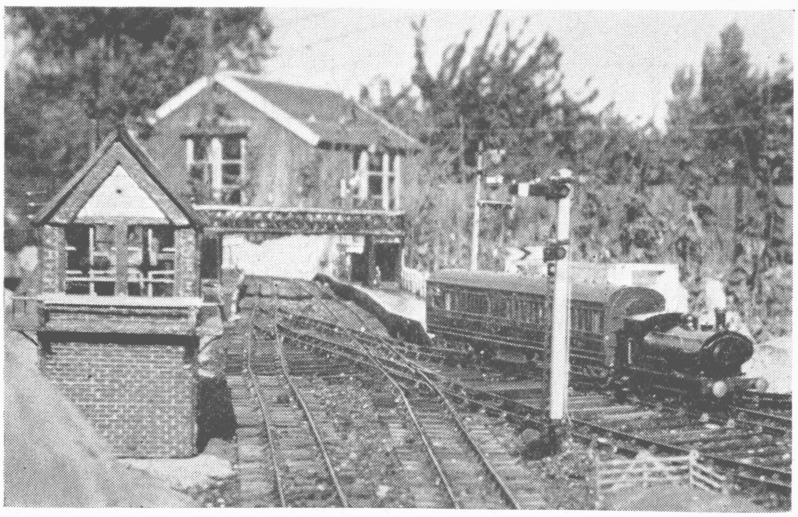
Let's have a look at the Crewchester line for a few moments and try to get at a few facts. A description of the general principles of running appeared in the March, 1956, issue of MODEL RAILWAY NEWS, so I want now to confine myself to how the clockwork engine behaves.

Operation

The compound with a rake of five coaches stands in City Road terminus in the garage, fully wound, and awaiting the road. Its driver has checked headlamps, couplings throughout the train, and tail-lamp (for he is guard as well as driver), and as soon as the green starter appears he releases the brake. Perhaps no other form of motive power gives so perfect a pull-away as a spring-driven engine in good condition, for it is smooth and very gradual, reaching a scale 30 m.p.h. as it leaves the garage. A slight gradient and the gentle curve over the points where the line joins the main Down-circuit serve to check any excessive speed, but once clear of the junction the engine takes the bit between its teeth and canters smartly down the bank to Rockhill Tunnel, races along the straight and finally enters Crewchester, coming to a gentle halt in Platform 5.

I will now pause for a moment while the chorus gets to work. Some of the more audible remarks include "Oh yeah !" and "Oh, come off it !" or "All done with mirrors, I suppose !"

All right—let's examine the reasons for this apparently perfect run. First, there was nothing haphazard about the way that train was made up for that journey. We know jolly well that the compound will just lift five heavy steel coaches on a level stretch such as City



First train of the day. Early-morning local leaves Rockhill Junction for City Road

Road, and that with this same load its normal run will take it exactly to Crewchester. Nothing more complicated than that.

The chorus, still not terribly impressed, now cries " All right—we will give you that—your show-train on an exhibition run. Very nice, too. But what about the return journey ? Can you do the same ? "

The answer is no. But then although an engine can haul a train from Birmingham to Cheltenham, it does not follow that that same engine can haul it back up Lickey, does it ! The answer for us —as with the real thing—is to give the returning train either a more powerful engine or a pilot. (We have no Lickey-banker at Rockhill.)

Let's have a look at another train. Standing in platform 4 at Crewchester is a northbound main-line express comprising five coaches and 6100 *Royal Scot*. Following the usual starting procedure, the driver releases his brake, and being on an up-gradient, it is possible that his fingers might give the engine the merest touch to give it initial impetus. (The electric-wallah, of course, does this also when he turns his controller nearly to maximum just to give a starting boost to his train, immediately returning it to normal as soon as the train is in motion.) Our train makes an even better pull-away than the compound, as the rising gradient does not allow the engine to reach more than about 40 scale m.p.h. until it has passed the road bridge north of Crewchester. Entering the straight stretch before Rockhill Junction the Scot settles down into its stride of about 60 to 65, which it maintains right the way down the bank, through the tunnel and until, approaching Crewchester once more, it eases gently into platform 4 once again, without being touched. Just as with the compound, the rising gradient into Crewchester serves to slow the train gradually. The *Royal Scot* is fitted with Bassett-Lowke's controlled six-coupled mechanism, which when kept just above ' minimum,' hauls this train the exact distance required. Manipulation of this speed-control adapts the engine to varying loads.

Just in case anyone should ask " What about the reverse direction, when you finish on a down-gradient ? " the answer is to wind the engine so that its power is nearly expended when it reaches the apex of the bank north of Crewchester, and its own impetus will carry it to the station. This is admittedly more tricky, but it can be done.

Many more such examples could be quoted, but we must leave Crewchester and try to summarise the position, seeing who has to what and how.

To the dyed-in-the-wool clockwork addicts I would say " The onus is (and I don't see how I can avoid a ghastly pun here) on us." Stop bemoaning the glories of prewar days and lamenting the lack of good clockwork locos today ; get together. If you are a club-member, talk it out and then make your collective voice heard. Join the Gauge " O " Guild and support their campaign for better service to gauge " O " men ; clockwork is one of their many concerns.

To newcomers to the hobby—please approach clockwork with a little more respect than most people accord it. You will get some pleasant surprises when you start experimenting.

You thousands of electric operators —it might be to your advantage to support a campaign for a really good spring-driven engine. Why not discuss it and air your views a bit. It really was heartening to receive so many letters from the electric-brigade saying how they would welcome a *decent* clockwork job !

Lastly—to the trade, whose difficulties are often overlooked or minimised by zealous modellers, I would appeal for a serious consideration of a really well-made clockwork engine. Is there not someone in the business with vision enough to perceive the commercial possibilities in such a project. For example, why not a G.W.R. saddle-tank ? The high boiler provides ample space for spring-expansion, and although I am not a G.W.R. fan I would head any waiting list for such a loco, provided it looked something like its prototype, could shunt, pull a branch-line train, and act as station-pilot.

Did I say I was not a fanatic ? I am not so sure. I can see myself (if I am not careful) leading a rally in Hyde Park soon with crimson banners inscribed " (Clock-)WORKERS OF THE WORLD UNITE ! " The crest will doubtless be a Norman Eagle, and the motto " Pro Bono Gauge ' O '."

ON THE COVER

The splendid photograph reproduced on the cover of this issue shows the departure of Britain's latest high-speed train, the " Talisman," on its first run from Kings Cross to Edinburgh, with a stop at Newcastle to change engines. The 393 miles are booked to be covered in 6 hr. 40 min., including the stop, and in each section of the journey the average speed is 60 m.p.h. start to stop. These times are only slightly less than those of the pre-war " flyers " over the same route, and already the " Talisman " has easily bettered them. Class A4 Pacifics are used for this train, the one in the photo being No. 60025, *Falcon*.—*Fox Photo.*

A CONTINUOUS CIRCUIT WITH A REVERSE LOOP

LAYOUT PAGE

By H. H. Powell

THIS layout occupies 10 ft. 6 in. × 6 ft. and is basically a continuous circuit with a reverse loop. The double track terminus has platform accommodation for four bogie coaches and a locomotive. The installation of a second crossover would provide a run-round, but its absence causes additional shunting interest. After the arrival of a train, a shunting engine would proceed from the locomotive shed, take out the empties and shunt them back to the departure platform.

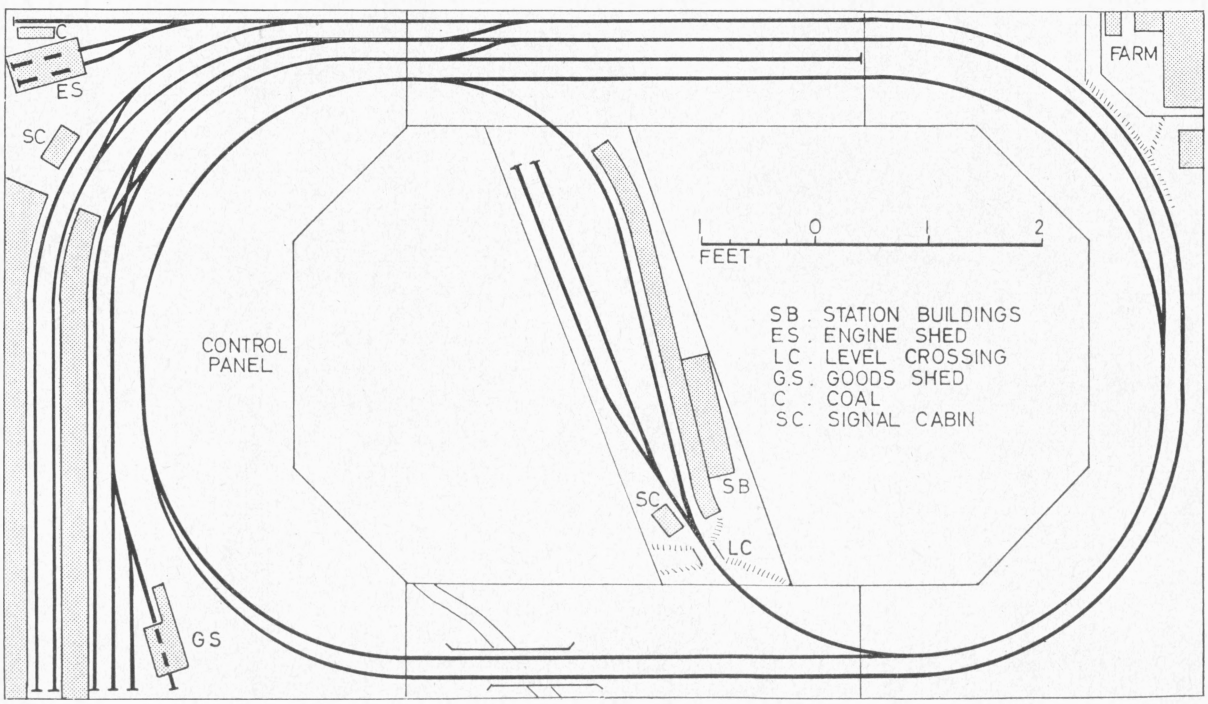
Curves

These are 2 ft. 6 in. radius maximum and 2 ft. radius minimum. By keeping the curves as large as possible, only a short length of straight is permissible on the reverse loop, thereby restricting the platform length of the country station. This station gives an excuse for the employment of an auto-train or railcar, but it could be omitted or its position changed with that of the bridge. As there is no room for a turntable and the locomotive shed is small, this is a layout for tanks.

Scenery

There is ample scope for scenic work, the corners could be utilised for a farm, timber yard, factory or quarry. That part of the circuit that passes the terminus could be completely covered by a tunnel (open back above the control panel) or a street scene with half-relief buildings. The terminus is shown on the drawing to be without station buildings, these might well be on a road bridge with steps leading down to the platforms. Alternatively, the concourse could be under the platforms or under a bridge carrying the track, as suggested by the Rev. Edward Beal.

Contributions for "Layout Page" are welcomed from our readers. Drawings should be to 1½ in. to the foot scale, and at least 300 words should accompany the design. Two guineas will be paid on publication of the contribution.



"Pennsylvania"

RAILWAY TOPICS
by
J. N. Maskelyne
A.I.Loco.E.

ARISING out of my article dealing with L.N.W.R. Webb compounds (MODEL RAILWAY NEWS, September, 1954), I have received two very interesting photographs from Mr. C. J. Alcock, of Reading, Berks. One of these pictures—and a very fine one it is—has been supplied by Beyer Peacock & Co. Ltd., of Manchester, who built the engine, and the other has come from the Pennsylvania Railroad Company, of the U.S.A. The engine had a very interesting history.

The " Dreadnought " Class

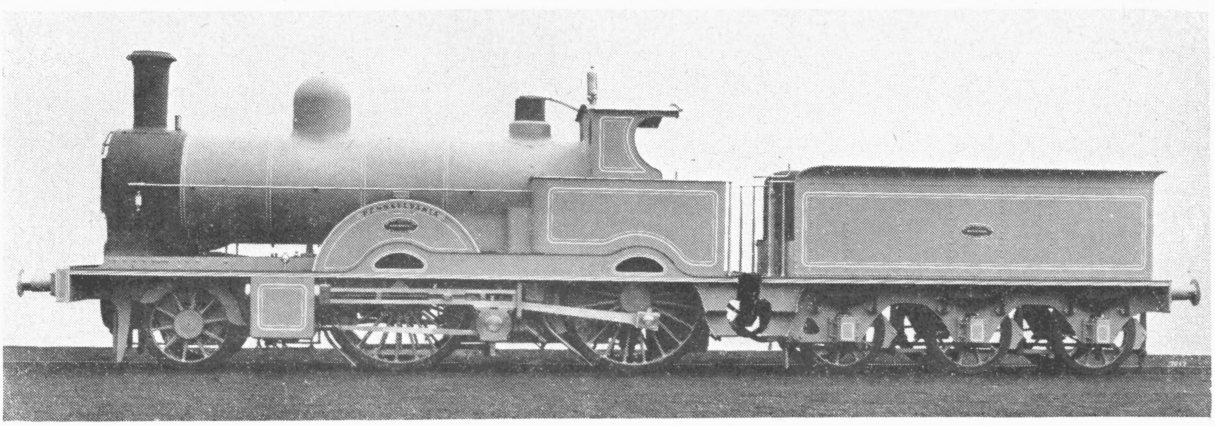
In 1887, F. W. Webb had many of his 3-cylinder compound engines at work on passenger and freight trains on the London and North Western Railway, and the latest type was then the famous " Dreadnought " class, which were employed on all the company's best express trains. For these engines, Webb claimed some considerable economies in the consumption of fuel and water, and the performances attracted the attention of other locomotive engineers, at home and abroad. In the United States of America, at that time, the steam locomotive had reached an advanced stage of development, but the compound locomotive was unknown. So, in view of the claims being made by Mr. Webb, the Pennsylvania Railroad Company requested him to build one of his compounds specially for them. This, however, was forbidden by law, but arrangements were made for copies of Webb's drawings to be sent to Beyer Peacock & Co. who built the engine for America. She was named *Pennsylvania*, and there were a few superficial differences from the standard Webb design. For example, the engine was equipped with the Westinghouse air brake instead of the normal vacuum brake ; a very large American-type whistle replaced one of the two usually supplied by Crewe ; the cab was slightly deeper than the standard L.N.W.R. type, and Beyer Peacock fitted a tender of their own pattern with the valance and footsteps altered to match up with L.N.W.R. design. The engine was completed in 1888 and handed over to the L.N.W.R. who dispatched her from Garston Docks to America. She was finished in the standard L.N.W.R. livery of black with red, yellow and grey lining, like that in use for certain B.R. engines today ; and I would add that she had been built under the strict supervision of F. W. Webb himself.

Cylinders

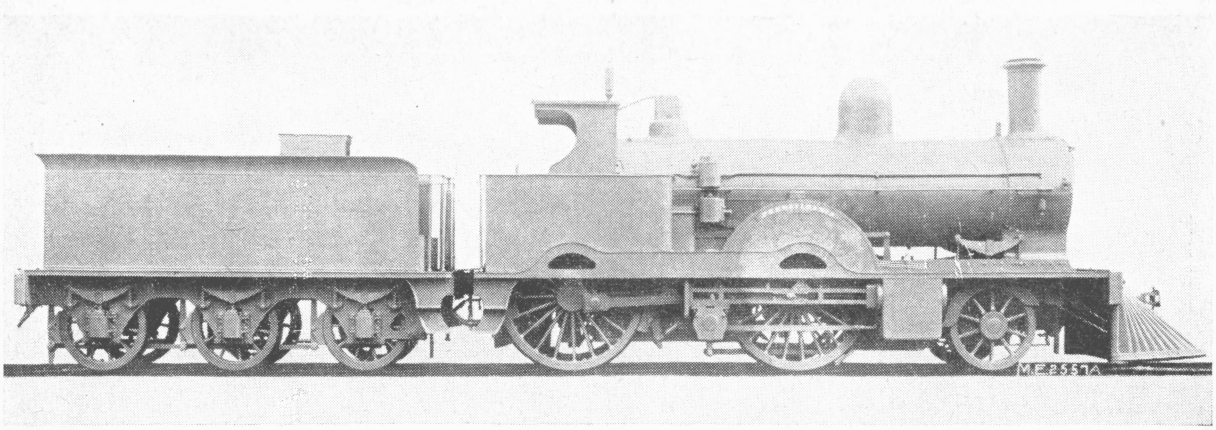
There were two high-pressure cylinders, outside, 14 in. dia. by 24 in. stroke, and one low-pressure cylinder inside, 30 in. dia. by 24 in. stroke ; the boiler had a heating surface of 1,402 sq. ft., the grate area was 20.5 sq. ft., and the working pressure was 175 p.s.i., reduced to 80 p.s.i. when boiler steam was admitted direct to the low-pressure cylinder when starting, so as to equalise the work done in the h.p. and l.p. cylinders. The four uncoupled driving wheels were 6 ft. 3 in. dia. and in all other detail dimensions the engine was similar to the " Dreadnought " class. The cab, however, was not quite the same shape as the standard Webb cab, as may be seen in the two photographs reproduced.

Interesting Details

And now we come to what, to me, is a most interesting point. The American photograph reproduced here is quite a new one to me. It shows the right-hand side of engine and tender, and it also shows the Westinghouse pump together with the pilot (or cowcatcher) and central coupling which were fitted after the engine arrived in America. But it reveals that the lining has gone and that the letters of the name have been filled in white, not black. In other respects the engine remains as built. Now, all other American photographs of this engine known to me, show her fitted with a large, square, double-windowed cab of the typical American style, on which is mounted an L.N.W.R.-type numberplate bearing the number 1320 ; a bell, mounted in a bracket, is fixed on the boiler barrel midway between the dome and the safety-valves, the latter being a pair of typical, tall American pop-valves, while the huge whistle projects from a fitting fixed to the back of the safety-valve base ; a large headlamp stands on top of the smokebox ahead of the chimney, and two small lamps (marker lights) are fixed one each side of the smokebox front, level with the boiler centre-line. The pilot and central coupling are both present, but the nameplate has black letters. A question to which I do not know the answer is : when was this new photograph taken ? If this question should catch the eye of some historically-



A photograph of the Webb 3-cylinder compound engine " Pennsylvania " by Beyer Peacock & Co. Ltd., showing the engine as built



An official Pennsylvania R.R. photograph of "Pennsylvania," showing certain modifications, but without the large American cab

minded American reader, I would very much like to hear from him.

An Experiment

Pennsylvania did not do much work in America ; she seems to have been regarded partly as an interesting technical experiment, partly as a curiosity and almost wholly as an unmitigated nuisance ! For she suffered from the usual Webb compound hesitancy when it came to starting a train, and all the well-known pantomime of men with pinchbars trying to encourage her to move in the required direction had to be resorted to " over the pond," just as it did here. And loud were the complaints of passengers who, with a good deal of justification, took violent exception to being thrown out of their seats when, at last, *Pennsylvania* had been persuaded to get a move on ! But in fairness I must add that an article in an American technical periodical claimed that, in comparison with American engines of the time, *Pennsylvania* did well in every way except starting, cutting coal consumption by one-third and usually gaining time on long runs. The disinclination to start, however, exasperated enginemen, operating staff and passengers ; added to which, the above-mentioned article commented on the very rough riding of the engine on American permanent way, remarking that " it would take a cast-iron man to stand the racket of the Webb compound over our tracks."

Poor *Pennsylvania !* She did her best, but it was hopeless, and after little more than a year, she was withdrawn.

MANCHESTER'S ANNUAL SHOW AGAIN

THE Manchester Model Railway Society's exhibition will be, once again, at the Corn Exchange, Hanging Ditch, and it will open at mid-day on Friday, December 21st ; on the Saturday it will be open from 10 a.m. until 9 p.m., and on the Sunday the times will be 10.0 a.m. until 9 p.m. There can be little doubt that this event will attract the usual large number of friends and devotees from far and wide, and they may be sure of a cordial welcome if they will make themselves known to the genial exhibition manager, B. Leslie Young, or any official, all of whom will be appropriately labelled for ready identification.

Running Tracks

The M.M.R.S. " O " gauge Fine-Scale Demonstration Track is in process of being re-laid, as the base material which was used when really suitable materials were scarce has proved unsatisfactory. Minor modifications of the layout are also being made.

EM 2-rail will comprise Sidney Stubbs's " Northchurch " Terminus attached to a completely new layout by Jim Edgar. In EM, too, it is hoped to demonstrate the electro-magnetic variation of the Alex Jackson Coupling which is fascinating to watch and most mystifying to the uninitiated.

" OO " 2-rail

The Chapel-en-le-Frith M.R.S. have promised to bring their extensive " OO " layout, the work of a few very enthusiastic people.

European prototypes will be featured on Major G. Lennox-Dickson's revised Continental layout on which he is expecting to add a Luftseilbahnen.

" OOO " Narrow-gauge

A working layout never before exhibited has been promised by Mr. J. Griffiths, whose work deserves to be far better known. There will also be a " OO " layout 3-rail made by pupils of the Droylsden County Secondary School which is expected to stimulate the younger visitors.

Trams

Manchester is known as the Model Railway Society who persuaded others that " Trams " are model railways. The " largest tram-track in the world " is to have an extension branch, and there will be quite a number of new models. Proper tram-type controllers will produce a once-familiar sound.

Static Stands

M.M.R.S. work will be grouped according to gauge only. Around the hall will be stands showing the cream of the work of about 20 kindred societies. All our old friends are sending again. For the first time the *Historical M.R.S.* will be represented, as well as other newcomers.

Trade

The trade will be represented by *Geo. E. Mellor*, the " gem " of Rhos-on-Sea, *George Slater* who populates layouts with his " Huminitures," *Douglas Models* with their narrow-gauge specialities, *Harold Elliot* who will be dealing with the productions of *Ian Allan* and *Percival Marshall & Co. Ltd.*, and a " *Railway Modeller* " & *Peco* stand with *Cyril Freezer* in attendance.

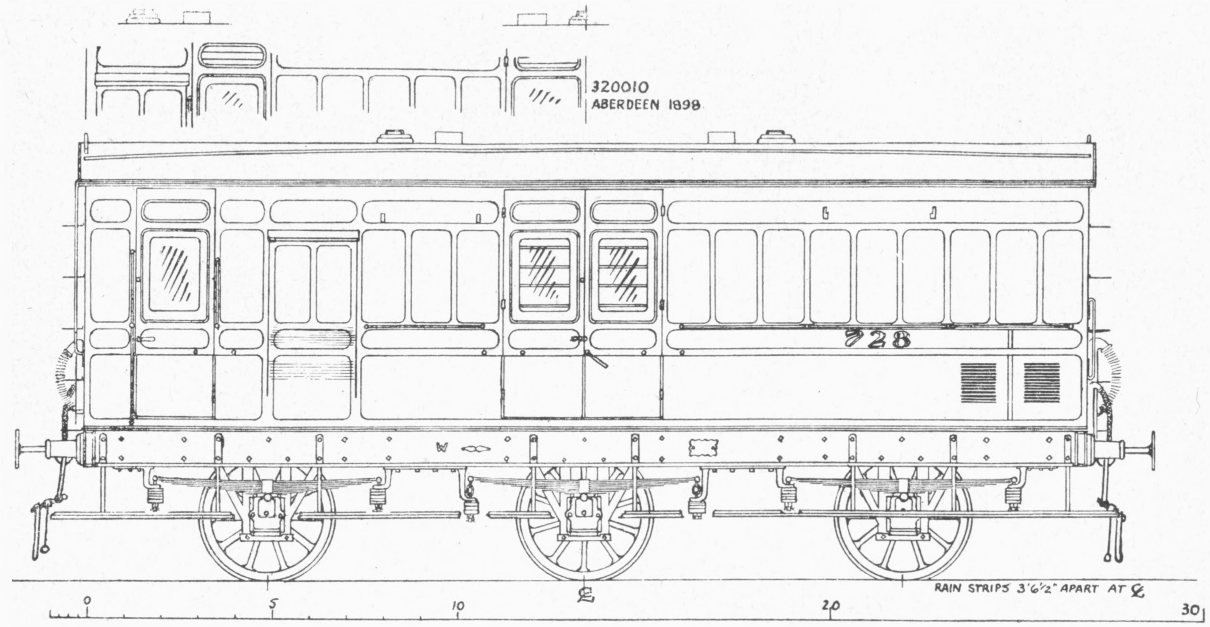
Advance tickets at 1/6 and 9d. respectively for adults and children are available from those traders in Manchester who advertise with MODEL RAILWAY NEWS or direct from the Honorary Exhibition Manager, B. Leslie Young, 15, Queens Drive, Stockport, on receipt of appropriate P.O. and s.a.e. *These admit on any day.*

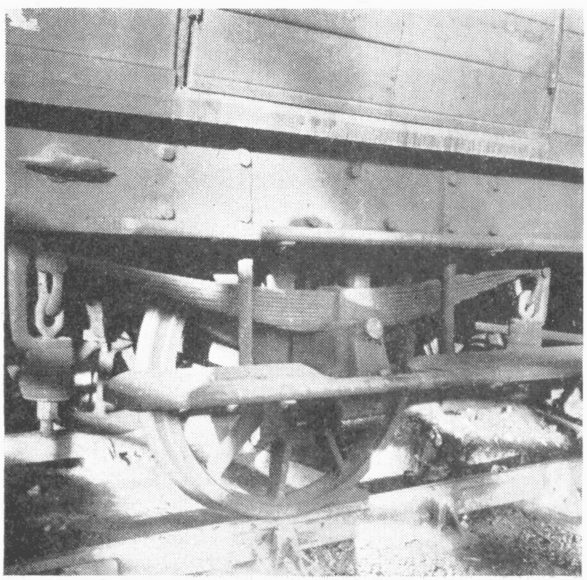
The 27-foot Full Brake Vans G.N. of S.R.

By Iain R. Smith

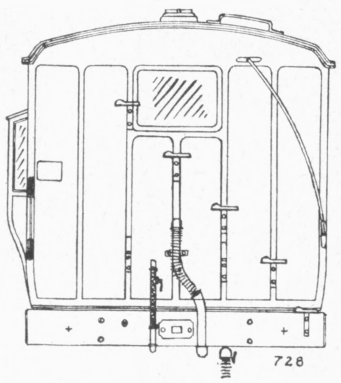
THERE were three varieties of 27 ft. long full brakes on six wheels on the Great North of Scotland Railway, and of these, number 728 is representative of the most modern; 27 ft. in length, 8 ft. wide over the body, the body side height 6 ft. 6 in., this coach ran on wheels with ten spokes, the wheelbase being 17 ft. evenly divided. Guard's duckets are on both sides, with lamps in G.N.S.R. days. The plugs for the oil lamps are shown in place with the circular holders near them to hold them when the lamps were in place. Both ends were similar.

The next earlier type is shown as number 320010, a service number, in the small variation drawing. The ends are the same as 728, only the end windows are 19 in. in depth over their frame. In the side view the duckets are almost at one end, then the guard's door and then five panels to the double doors in the centre. The rest is similar to 728, but the ventilator bonnets are of the louvred type. The centre doors have fixed lights, not droplights, and have the usual four bars behind each glass. The underframe is generally similar in all three types of brake van. This

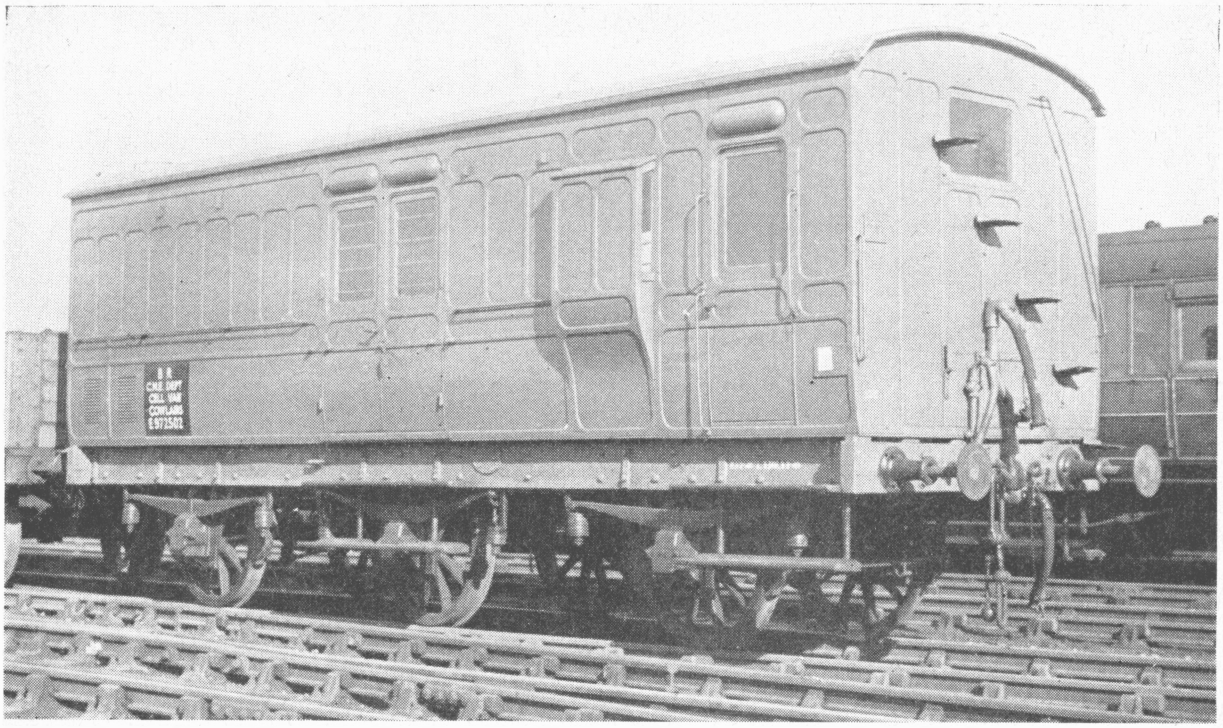




Above and right: Side and end elevations of G.N.S.R. brake-van No. 728, and a variation drawing of No. 320010



Left: The centre wheel of the G.N.S.R. six wheel brake, No. 320010



The G.N.S.R. brake and parcels van, No. 972502

particular vehicle was built in 1898. Numbers 742 and 743 were of this type, but in 742 the third panel moulding in from the end above the waist is continued down to the foot of the body, passing down close to the inside end of the dog box ventilation louvres.

The earliest type of this general contour and layout differs in detail only and No. 71 was of this type. There is one panel at the end, then the guard's door, then the ducket, followed by four panels to the centrally situated double doors, from which there are nine panels to the other or dog box end. The bonnets are louvred, the centre door lights fixed and of a flush type later to be mentioned. Below the cantrail there is a panel over the ducket, another covering the adjoining four side panels. Another covers the four side panels beyond the centre doors, another over the next two, and one over the end three above the dog boxes. The dog boxes have three inch wide mouldings between and on each side from waist to body foot. The wheels are solid and axleboxes have plain covers. The most noticeable feature of this type is that at and below the waist line all panelling is square and the waist panel is of considerable depth.

These notes, together with a drawing of a coach with similar type of panelling to appear later in this series, will give enough information to make a reasonably accurate model of number 71. All the above numbers with prefix 7 are L.N.E.R. numbers.

Repairs to Wheels on Clockwork Mechanisms

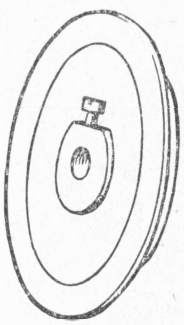
AS is well known to most modellers, driving wheels of lead or lead-alloy types, when fitted to clockwork mechanisms, are a problem when they work loose, and as they are usually force-fitted on plain round axles the difficulty of fixing and " squaring " is increased.

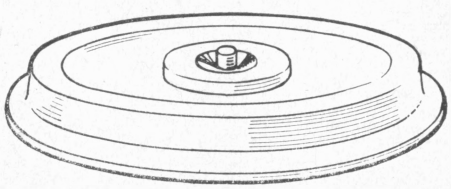
The following method has been found effective as a remedy in a number of cases, though where the wheels are of the very old type, and of soft lead, it is not always successful, as the metal is too soft to screw, and then the second method is recommended.

First file a " flat " on the inside of the centre boss, where there is room to do so, as in the first sketch, drill and tap this for a grub-screw of suitable size, when the wheel can be fixed and " squared " easily. When this has been done, the axle can be marked slightly opposite the grub-screw and a slight flat filed thereon which will enable the grub-screw to grip better.

There is another way of fixing these wheels, but it is really only a temporary one. Countersink the front of the wheel (see sketch) to some depth, place on the axle after thoroughly cleaning the latter. After squaring, fill-up level with solder, and, if necessary, clean off with a file. Many a good c/w mechanism has been renewed by these methods without the necessity of fitting properly squared axles and scale wheels.

—M. K. HUGGARD

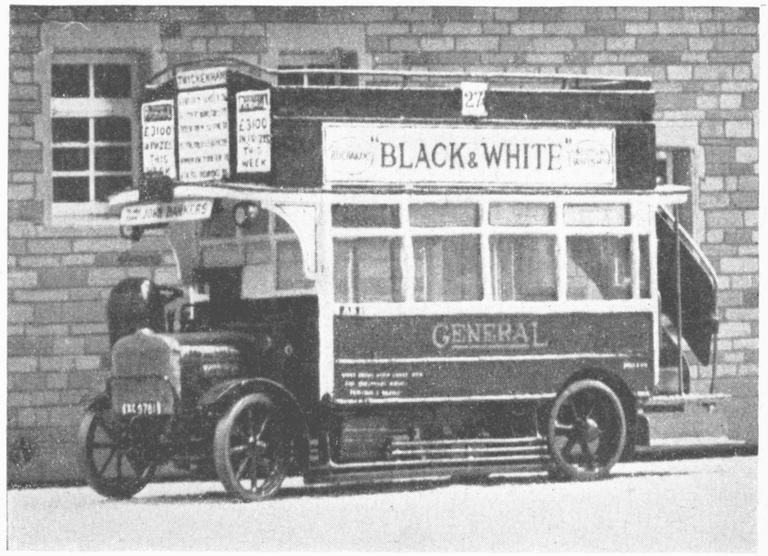




Modelling a "General" Bus

Let's face it! Subsidiary transport is needed by most railways. How about this piece of history on your layout?

By
R. E. Tustin
(*Leicester Model Railway Group*)



The author's 7 mm. scale model of K979

FOR those whose model railways represent the London area in the twenties, this drawing may be useful. The London General Omnibus Company's K type bus was well in evidence on London's streets during that period and a model of one of these vehicles would add interest and a splash of colour to the railway scene.

The first "General" standard type was the B which appeared in 1910, and many saw service in France during the 1914-18 war. (Edward Beal includes a drawing of a B on page 104 of his book "Modelling the Old Time Railways.") Immediately after the war there was an acute shortage of buses, and in August 1919 there appeared the first post-war type, a 46-seater which was known as the K type.

An official L.G.O.C. photograph, showing the nearside of K979 and illustrating the style of livery used on the K type for most of their life. Photo courtesy L.T.E.

Judged by present day standards they can hardly be considered to be very beautiful, for the angular boxlike body with open top and external stairs gave them a somewhat ungainly appearance. The type was, however, the first to adopt the now universal position for the driver alongside the engine and the placing of the rear wheels in wheel arches let into the body. The first few had longitudinal seats but most had transverse seats for the lower deck, which was also an innovation. Four years were to elapse before the modern style of bus with the frame dropped behind the engine was available. This was the NS type.

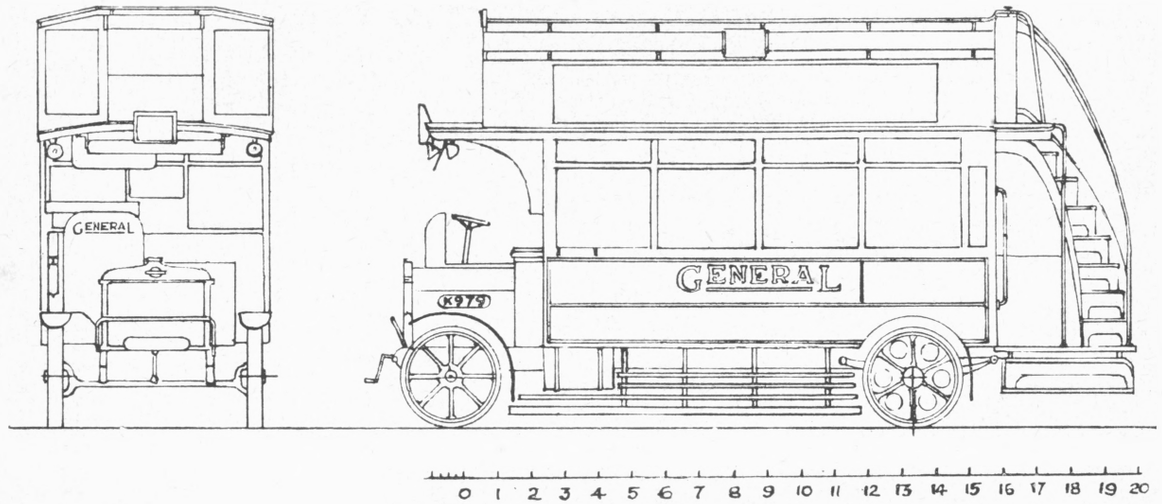
The K type was built from 1919 to 1926 and eventually numbered 1,132 vehicles, but some of this number were single deckers. The double deck type had disappeared from Central London by 1930 but lasted on some country routes (e.g. 90 Richmond Station to Chertsey Station) until 1932.

I always had an affection for the Ks, as they worked on the 27A service between Highgate and Teddington in the days when I lived in a house on that route. My early recollections of London always include one of these buses somewhere in the scene.

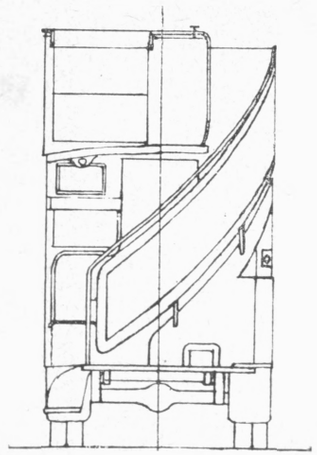
I was browsing through some old copies of the "Tramway and Railway World" in the Patent Office Library some years ago when I came across a drawing of a K and made a tracing of it. The drawing with this article is largely prepared from that source with additional details gleaned from official photographs. From the drawing I built a 7 mm. scale model of K979 recently, and readers may like to have a few notes on constructional details.

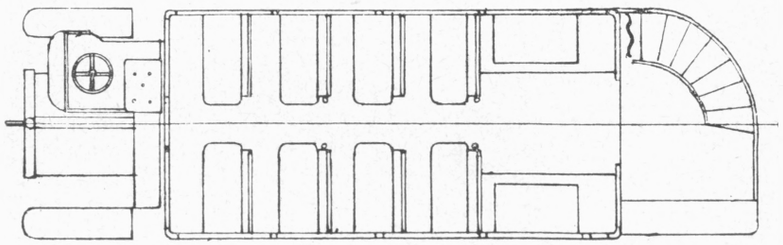
I started with the lower deck sides and ends, and cut them out of 1-mm. three-ply wood with a fine piercing saw, afterwards trimming up the window openings with an old file. The floor and roof were then made from venetian blind lath, the roofing-piece being covered with card to form the top deck floor. The inside of the upper deck is very conspicuous on the model and the wood stripping on the floor was accordingly faithfully reproduced in card, there being six longitudinal strips down the centre gangway and four transverse ones to each seat. Lower deck seats were built up from odd bits of plywood and upholstered with pieces of discarded grey flannel trousers! Talc was stuck and pinned at the back of the windows and the whole of the interior painted, the colours being grey for the floor, brown for the sides below the windows and white for the windows and roof. Adverts for Libby's Milk were painted below the two front windows and representations of the transparencies affixed to the side windows were painted on the inside of the talc. The lettering "Glaxo," "Halls Wine" and "Jeyes Fluid," etc. was scratched on to the paint so that it faced the inside of the bus. Small holes were drilled along the edge of the floor to the top deck and fairly long household pins pushed through from the underside so that the brass top deck sides could be soldered to them. The back platform was formed from thin plywood, nailed on and slatted transversely, and then the lower deck was carefully assembled, not forgetting to fit the four brass grab-poles which were so conspicuous on the lower decks of the old "General" buses. (To keep the brass shiny I coated them with petroleum lacquer.)

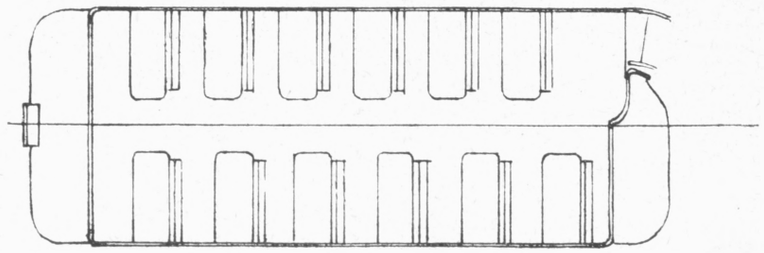
The upper deck is made from brass, the sides and ends being cut out with a piercing saw and soldered together, and then to the aforementioned fixing pins. The seats, cut from brass and bent to shape, were then soldered to the sides and supported alongside the central gangway with more pins. The staircase was also made up from brass—a fiddling job this—and held on to the body by the handrails made of brass



Front, side and end elevations, and plans of both decks of a K type General bus





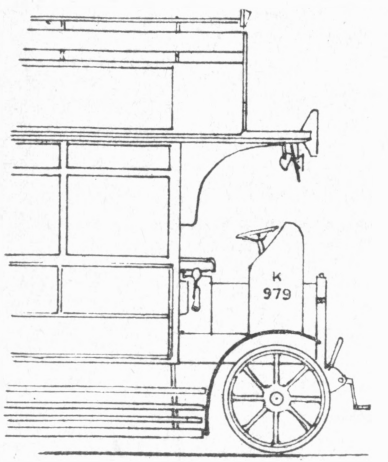


wire. Slots for destination boards and route stencils were fitted at this stage.

The chassis is entirely separate and made from brass, the main frames from $\frac{1}{16}$-in. strip and the rest from sheet. The only features of particular interest are the radiator and the driver's scuttle. The former was etched on brass when a batch of locomotive nameplates was being prepared for the Leicester Model Railway Group. It is sweated on to a thicker piece, rounded off with a file and brought to an aluminium colour by gently running a fine film of solder over it. (This requires great care in order to avoid the blotting out of the name "General" on the front.) The scuttle was bent up from sheet by cutting and folding, the rounded portions being filled with solder and filed. Several attempts were made before I did one to my liking.

I rather hopefully tried to use some old "O" gauge wagon wheels for the bus road wheels. I had in mind removing the flange and sticking paper tyres on, but gave up the attempt, as they were far too heavy in appearance. Finally I adopted the laborious process of cutting them out of brass with a piercing saw and bending up the tyres from $\frac{1}{4}$ in. by $\frac{1}{16}$ in. brass strip, a long-winded business but worth it, as the wheels now have a satisfactory appearance. The front axle has proper Ackerman steering ; it is not, however, connected to the steering wheel but is only provided to enable the bus to be placed in characteristic poses on a suitable wheel lock. Lifeguard, steering wheel, starting handle, driver's seat, etc., are all made up from wire.

The painting of old-time buses and tramcars does, I find, require a good deal more care than the average rail vehicle, in view of the more intricate lining usually employed and the wealth of advertising matter found on the vehicle. A lot of research was required to obtain the authentic details, for I wanted my bus to represent the period about 1928. London Transport Executive kindly supplied two excellent photographs which are reproduced herewith and I spent a long time burrowing in old copies of the "T.O.T." Magazine (the Underground Group Staff Journal) and various books on London road transport which have appeared in recent years before I had all the gen I required.



Sketch showing the off side or driver's side of the cab

An off side view of an early member of the type. Note that the lower panels were in chocolate brown and that rather more elaborate corner motifs were used for the lining out.—Photo courtesy L.T.E.

Eventually I was satisfied and went ahead on the painting—the body and chassis were painted separately, by the way, as this proved a good deal easier. The windows and body corner pillars had two flat and one glossy coat of white and the remainder of the body, bonnet, scuttle and petrol tank had a coat of grey, a flat red and a coat of red enamel. ("Robbialac" Signal Red is just the right shade.) The inside of the top deck, including the seats, is brown and the wheels and lifeguards red oxide.

The body sides are panelled out in black, the corners having a rather elaborate style, as shown in the photo. Large gilt transfers with black edging reading GENERAL appeared on each side and small ones in similar style were under the window on the back platform, and on the scuttle. In small white lettering near the front of the body on each side appeared the words "London General Omnibus Company Limited, John Cristopher Mitchell, Secretary and Treasurer". On the nearside behind the wheel arch it read "Speed—12 m.p.h." (!) and on the opposite side "U.W 3.17.0 F.A.W 2.15.0 H.A.W 4.5.0" on three lines of lettering.

Advertisements comprise "Black and White" (black lettering, shaded grey on a white ground) and "Maples Artistic Furniture" (white lettering on a G.W green ground). These two are on each side of the bus, two newsbill adverts are on the front and "Fit Dunlop and be satisfied" (black letters edged in white on a yellow ground) is down the rear stairs.

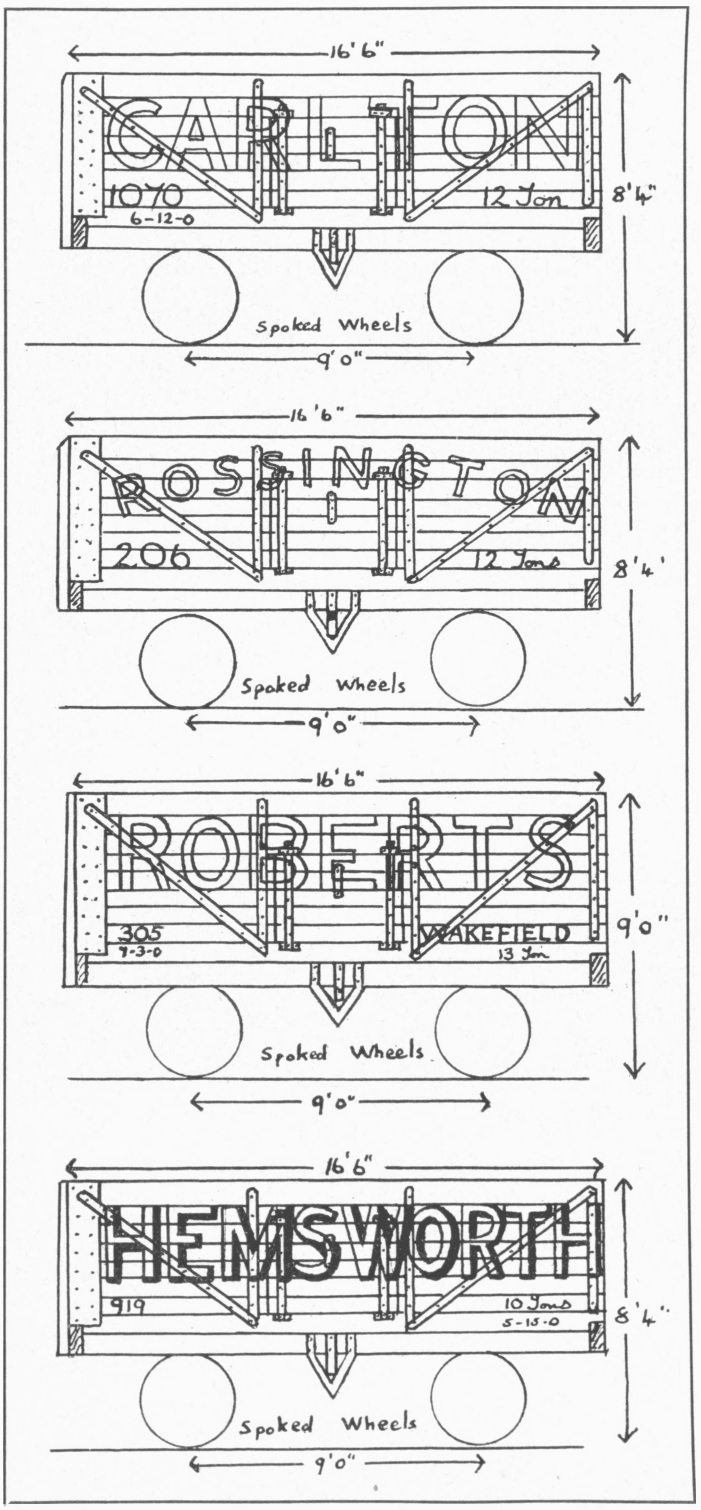
The destination boards and route boards are detachable, as also are the route numbers. The latter caused quite a headache, as I wanted proper cut-out stencils in the true pre 1930 L.G.O.C. manner. I succeeded in cutting them out of thin brass sheet with a very fine piercing saw, even including the A in the route number 27A ! The lettering on the route boards is something of a guess, and if any reader can supply me with the true wording for the intermediate points served by this service I should appreciate it. Incidentally, the original boards had a flap hinged horizontally on the centre of the route board so that the points served could appear in correct sequence for both directions of route. Later, this was abandoned and a plain board showing only the points *from* London was substituted.

When everything was dry I screwed the body on to the chassis and my little K979 was complete (complete, that is, apart from one little detail which I confess beats me—the mackintosh seat covers hanging from the seat backs on the upper deck and the similar sheet on the driver's scuttle. In wet weather the latter came up to the driver's chin and his outside passengers wrestled with theirs to try and keep themselves dry !)

The L.P.T.B. has kept one of each of the principal types of buses which have served the London public throughout the years. The K type vehicle preserved is 474 and when I last saw her in Reigate garage a year or two ago along with her older and more recent associates, it was pleasant to try her hard seats again and conjure back memories of bumpy journeys along the Chiswick High Road in the nineteen twenties.

Note: I apologise for a minor omission on the drawing. There should be a cover fillet to the left of the word "General," matching that on the right.

PRIVATE OWNER WAGONS



FURTHER to last month's three Private Owner wagon drawings from the sketchbook of Mr. Frederick Lee, here are four more, all of which could be seen in large numbers in South Yorkshire prior to nationalisation.

CARLTON 12-ton Open Wagon No. 1070

A standard seven-plank wagon with side and end doors. The livery of this wagon is a black body and underframe, with all lettering plain white.

ROSSINGTON 12-ton Open Wagon No. 206

This wagon is also of the standard seven-plank design with side and end doors. Again the body and underframe colour is black, with all lettering plain white. The curved lettering looks very attractive on a model and is not quite so difficult to achieve as may seem.

ROBERTS 13-ton Open Wagon No. 305

A slightly higher wagon this one, with an eight-plank body, side and end doors. Body and underframe is black, with all lettering plain white.

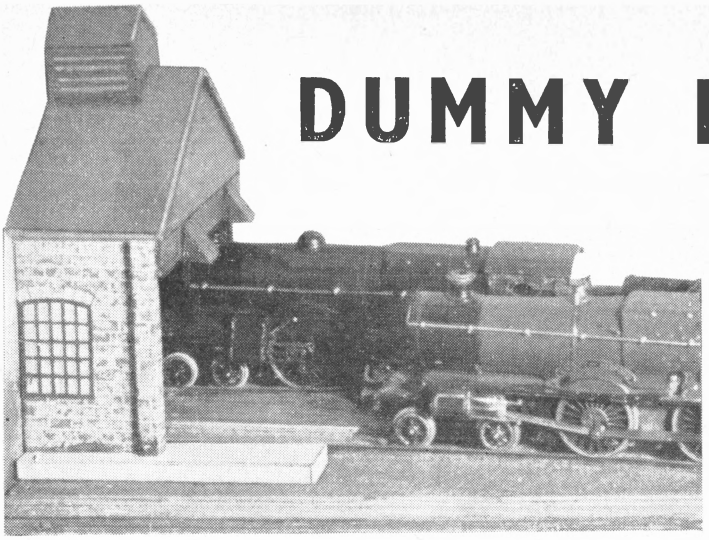
HEMSWORTH 10-ton Open Wagon No. 919

Another seven-plank wagon with side and end doors, but this time only rated for ten tons. Why seemingly identical wagons for size and capacity should be rated for 10 tons, 12 tons, 13 tons and even 20 tons, I never have been able to understand.* A red oxide body and solebars with black axleguards etc. is the livery, with the large lettering white shaded black. Small lettering is white only.

*It depends on the nature of the material to be carried. For example, one ton of coke requires more space than one ton of coal.—Ed.

DUMMY FRONTAGES

By H. A. Robinson, B.Eng.



A dummy engine shed, showing a model locomotive "entering"

MAKING the most of space is of paramount importance in nine out of ten model layouts. Illusion plays a big part in doing this, and the topic of obtaining *apparent* greater size by illusionary methods is wide. One of its aspects is the putting in of dummy frontages which suggest unseen features out of sight.

An Illusion

An example of illusionary work with frontages is the dummy tunnel portal which conveys to the onlooker the idea of miles of non-existent track beyond.

The design shown here is for a dummy engine shed which certainly produces the feeling of a large shed running into the wall. There is not the least reason why the idea should not be extended to the goods yard, and dummy goods shed entrances constructed, while the suggested tunnel portal might well be tried in the effort to give seemingly greater size to the layout.

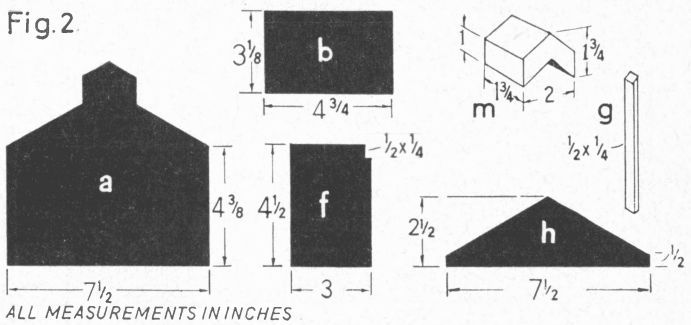
Construction

With regard to the engine shed, however, the materials required are some rectangles of $\frac{1}{4}$ in. wood, several pieces of stiff card (about $\frac{1}{8}$ in. thick will do well) and a sheet of thinner card. Also needed is a block of wood $1\frac{3}{4}$ in. $\times$ $1\frac{3}{4}$ in. $\times$ 2 in. and brick paper with a little paint for finishing. Joining up of the parts is by short screws and model-maker's pins.

The shaping of the parts can be clearly seen in Fig. 1. Back (a) is cut from the thin card (dimensions shown in the silhouette (Fig. 2), while the roof (b) and base (c) come from the thicker. The sides (f) and strips (g) are taken from $\frac{1}{4}$-in. wood, as is also the front piece (h), while the raised section of roof (m) is shaped from the solid block.

Assemble everything as Fig. 3. Start from the back. This overlaps the sides, base and roof, and so gives complete rigidity. It screws into the edges of the side-pieces (f) while a series of pins (p) holds the top edge and roof firmly together. Two or three small screws and glue secure the top of the back to the raised part of the roof. The base (c) is put in position by several short screws up into the lower edges of the sides, and another series of pins is pushed into its rear edge, coming through the lower lip of the back. This method of making a pin seam is quite sound, especially where it does not take any main strain. If carefully pushed in,

Fig.2



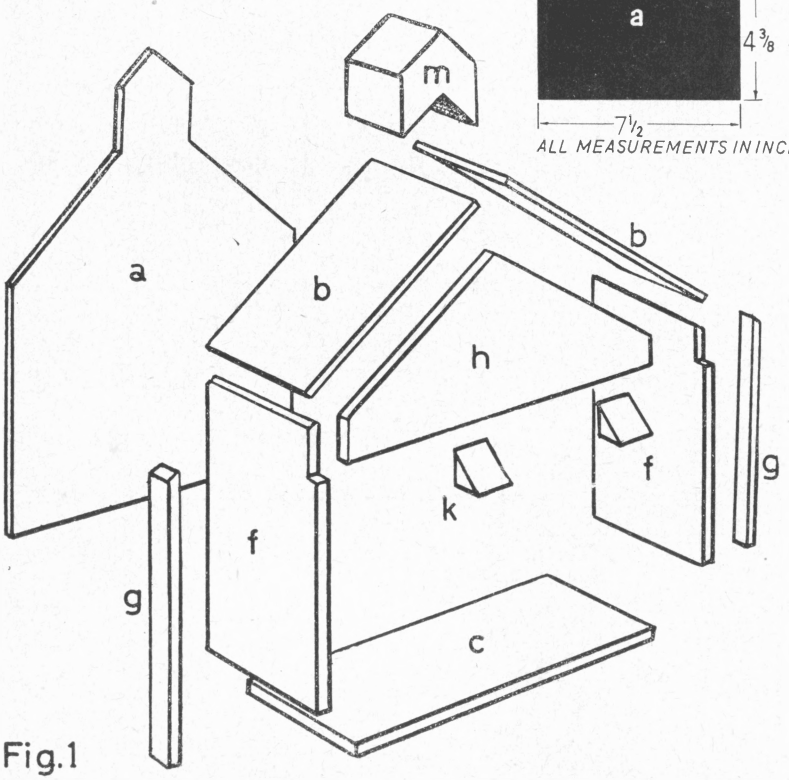
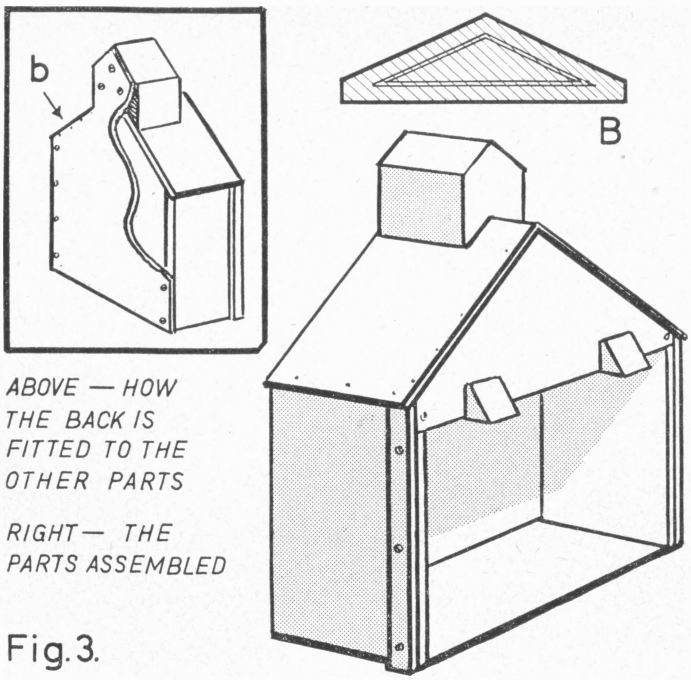


Fig.1



ABOVE — HOW THE BACK IS FITTED TO THE OTHER PARTS

RIGHT — THE PARTS ASSEMBLED

Fig. 3.

the pins have somewhat the same multiple effect as rivets.

The block (m) is already held by the screws from the back, but to make it more rigid, tap a pin or two up through the roof into its base.

Fasten the two smoke deflectors (k) to the front (h) by a screw each, and fit the complete piece on the ledges at the top of the sides. Put in a screw at each side and secure the roof with a pin or two into the sloping edge of (h). The strips (g), bevelled to go nicely under the slight eaving effect of the roof, are held by two short screws each.

To finish the dummy front, paint the roof and inside walls and back dead black. Paste brick paper (of not too large-size bricks) on the sides and complete with the windows as shown, which are simply drawn on white paper in Indian ink and gummed in position. Colour front (h) buff and give relief by putting the lines as (B) Fig. 3.

All is now complete and the result, it will be found, is a very presentable building which gives every impression of being only the entrance to a larger building set back in the wall, which is what is wanted.

SAFEGUARD YOUR EQUIPMENT

MOST forms of controller for model electric trains contain some kind of overload protection device designed to disconnect the power supply from the track in the event of a short circuit on the track.

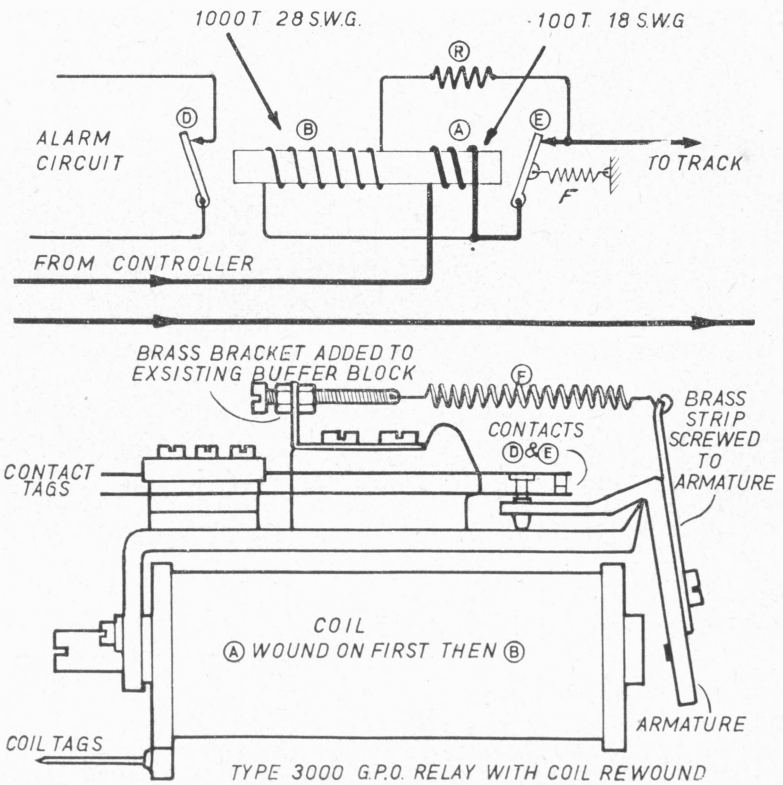
This commonly takes the form of a switch held closed against the tension of a spring by means of a catch, which is released by an electromagnet when the current rises above a certain value, the switch being reset by pressing a button when the fault has been cleared.

A very simple self-resetting cut-out can be made up from the parts of an ex-GPO 3000 type relay, easily obtained from one of the many shops which sell ex-services radio apparatus.

Referring to the diagram, it will be seen that the relay has two sets of contacts, one a 'make' and one 'break.' The coil is wound with two separate windings, one of very low resistance wound with 100 turns of 18 or 19 SWG enamelled wire, shown in the diagram as coil (A), the other of 1,000 turns 28 SWG enamelled wire (B).

The current supply to the track is fed through coil (A) and the 'break' contact (E). An adjustable spring F prevents the relay operating until the current rises above the required maximum value when the current is sufficient to overcome the spring F and then (E) opens and inserts the coil (B) in series with the track. A resistance (R), in series with (B), limits the current now flowing to the fault to some low value, say 1 amp, which is enough to retain the relay in the operated condition when passing through the 1,000 turn coil (B).

The power supply and controller is now protected from excessive current by (R) until the fault is cleared, when current ceases to flow in the relay coils so that it releases, restoring the circuit to its normal condition. The contact (D) operates a warning lamp to show that the cut-out has operated and that a fault exists.—J. A. Fox.



The "Four Ways" Gauge "1" Outdoor Model Railway

By E. T. R. Ball

THE outdoor line about to be described is a distant relative of the gauge "1" indoor system which grew up over the period 1913-1925. With the Editor's permission, photographs of the earlier indoor line are published. These are numbered 1, 2 3 and 4. Photograph No. 1, taken round about 1913, shows a four-wheel clockwork locomotive of nondescript appearance and a number of Bassett-Lowke tinplate goods wagons which were, at the time, considered very good replicas of their prototypes.

It will be noted that the track is of the tinplate type which was very popular in those early years, and this track was mounted on a substructure raised from the floor. Photographs 2, 3 and 4 show this model railway as it was in 1925 and represents the final phase of the author's efforts at an indoor model system. Up to this time only clockwork locomotives had been employed.

Outdoors

After this line had been disbanded, a quiescent period of some 15 years was to elapse before a decision was made to lay down an outdoor line and adopt steam as a method of propulsion in lieu of the spring-driven mechanism. With this end in view, a simple layout with unidirectional running was adopted especially to observe the performance of gauge "1" steam locomotives.

At first the line was mounted on a strong wood substructure at ground level but this was not conducive to easy working, and so after four years the line was raised to a height of approximately 24 in. above ground level. This naturally reduces the scenic value but makes operation much more satisfying. The diagram shows the layout as it is at present, the maximum length of continuous track being 140 ft. *via* the West End loop. The line is by no means level, as can be noted by the gradient posts indicated on the plan in the conventional way.

Rolling Stock

At the present time the author possesses six steam locomotives, the majority of which have been obtained secondhand through advertisements in this magazine. They are as follows :—

Internally Fired

One Bassett-Lowke L.N.E.R. 2-6-0 (painted black).
One Bassett-Lowke L.M.S. 4-6-0 (painted maroon).
One engineer-built L.N.E.R. 4-4-2 (painted green).
One engineer-built G.N.R. 4-4-2 (painted green).

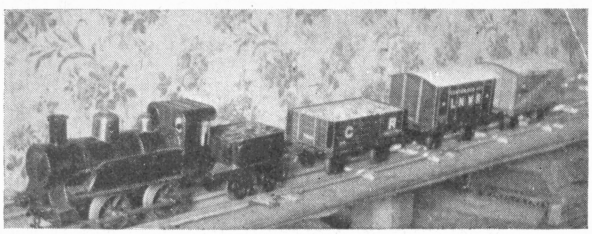
Externally Fired

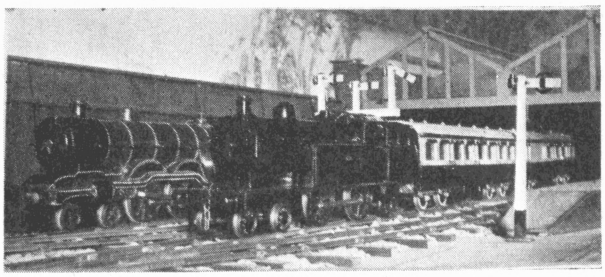
One Bassett-Lowke L.N.E.R. 2-6-0 (painted green). Modified by the author to air-smoothed type.
One Bassett-Lowke "112" 0-4-0 tank (painted green).

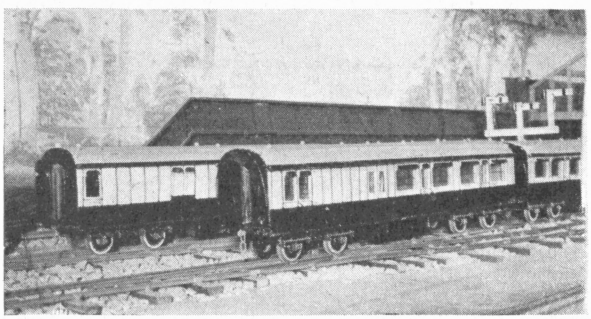
It will be noted that two of these locomotives are fundamentally externally-fired types and as such are not very successful in the open air conditions. It is, therefore, anticipated that the L.N.E.R. 2-6-0 will shortly be rebuilt as an internally-fired type to bring it in line with the remainder of the locomotive stock.

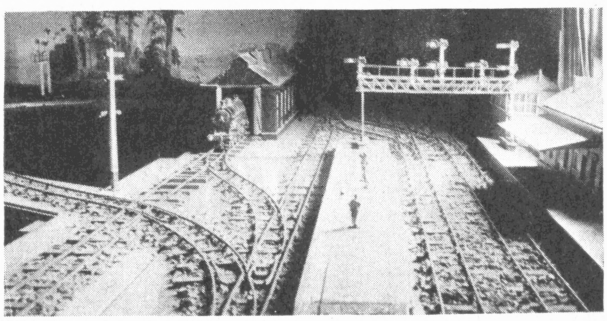
A Rebuilt Loco

It is also interesting to note that the L.N.E.R. Atlantic shown in photograph 8 was a model which was originally built in 1926 or thereabouts, but did not give the original owner much satisfaction. This resulted in his persuading that well-known *Model Engineer* contributor, "L.B.S.C." to rebuild the locomotive for him, and some readers may remember that in

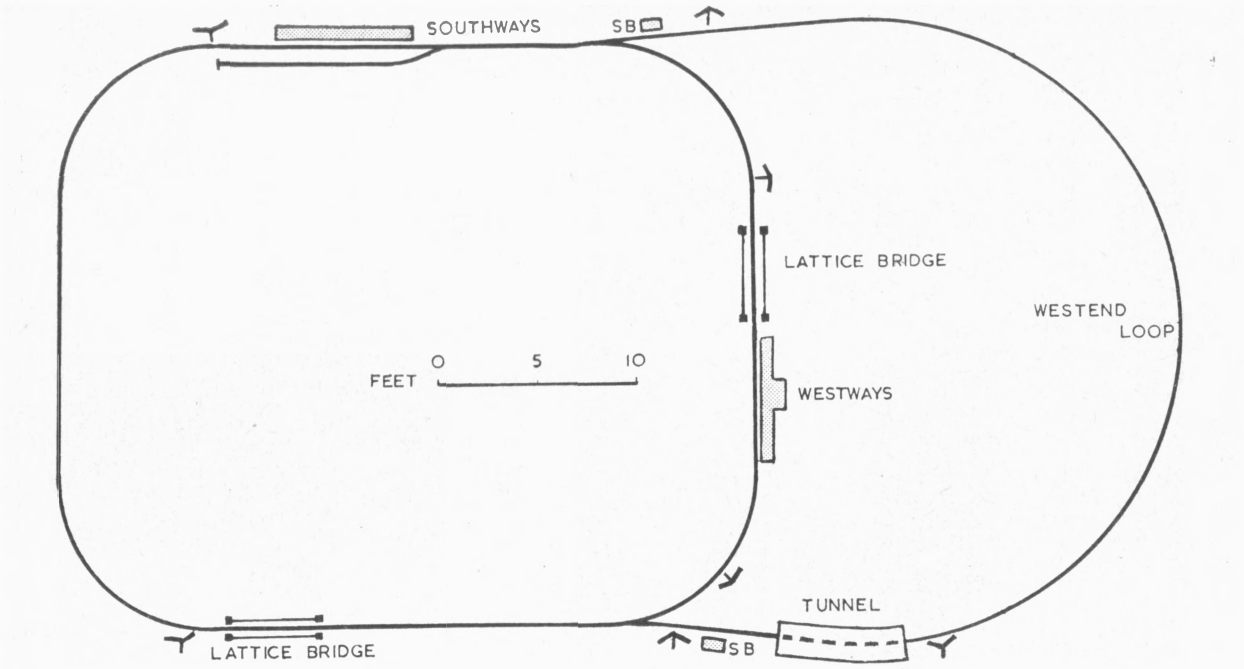




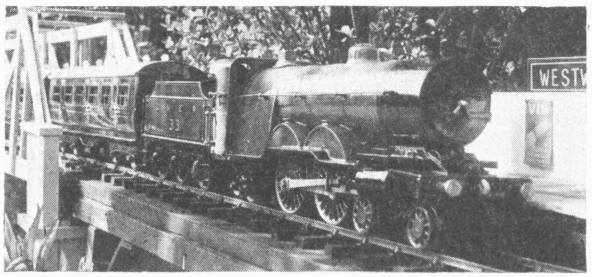




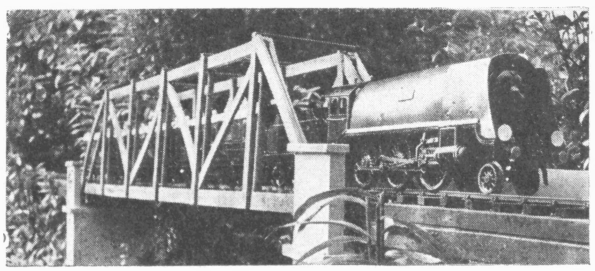
Photographs Nos. 1 to 4. Views of the writer's indoor model railway 1913-1925



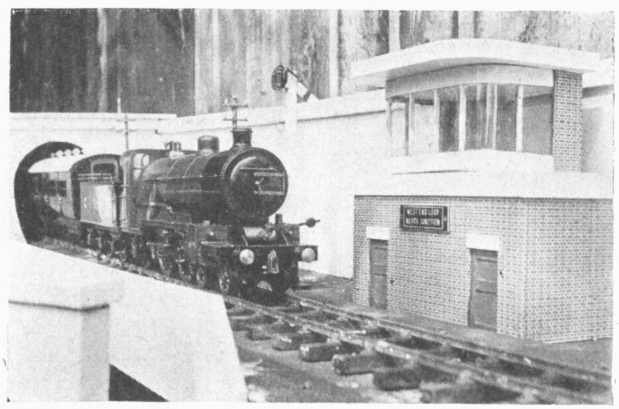
Photograph No. 5. View of the outdoor line when first constructed in 1940. (Ground level)



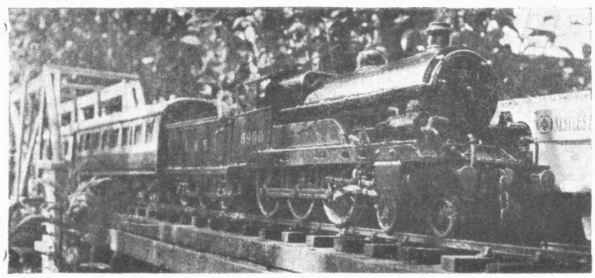
Photograph No. 6. L.M.S. 4-6-0 loco passing Westways Station



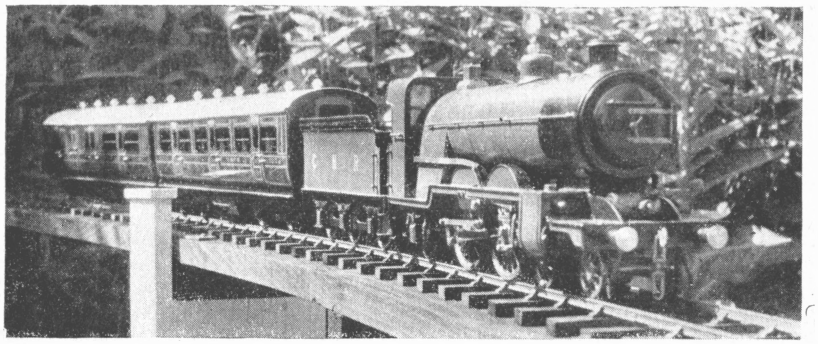
Photograph No. 7. Air-smoothed 2-6-0 locomotive and train passing over lattice girder bridge



Photograph No. 9. G.N.R. Atlantic leaving tunnel on West End loop



Photograph No. 8 L.N.E. Atlantic and train entering Westways Station



Photograph No. 10. G.N.R. Atlantic and train on West End loop

May, 1927, a very glowing description with photographs submitted by "L.B.S.C." appeared in *The Model Engineer* after the rebuilding had been completed.

The G.N.R. Atlantic shown in photograph 9 is, without doubt, the best model so far owned by the writer, in so far as adherence to scale proportions and finesse of workmanship are concerned. This locomotive was obtained from the Hobbies Shop, Bradford. Its performance, too, is most satisfactory.

It should further be noted that all locomotives are methylated spirit fired.

The coaching stock has come down the ages, and this may be apparent from inspection of the various photographs.

Signalling is far from complete: a number of L.N.W.R. pattern lower quadrant signals are installed but are not connected up for operation from signal boxes. It is hoped that arrangements will be made eventually for electrical solenoid operation of all signals.

A Self-Locking Relay

By F. A. Fry

THIS self-locking relay device came to my mind as a suitable means of control, not only for isolation purposes, but signal and points operation.

As can be seen by the photograph the assembly is of the simplest nature, yet very efficient, and is operated by through or bias switching, therefore continuity of current is unnecessary.

Any relays with the same type of armatures as illustrated can be adapted for this assembly; in my case a pair of American miniatures was used.

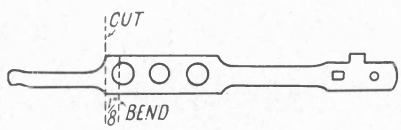


Fig. 1

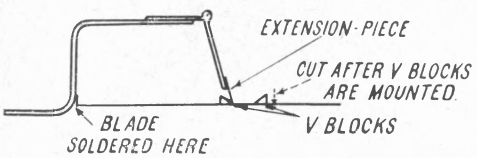


Fig. 2

A length of spring brass can be used for the locking blade, which runs under the base of the relay and is soldered to same; a contact blade taken from an old P.O. relay answered the purpose very well in my case, also the extension-pieces on the armatures were cut from the narrow section of another blade.

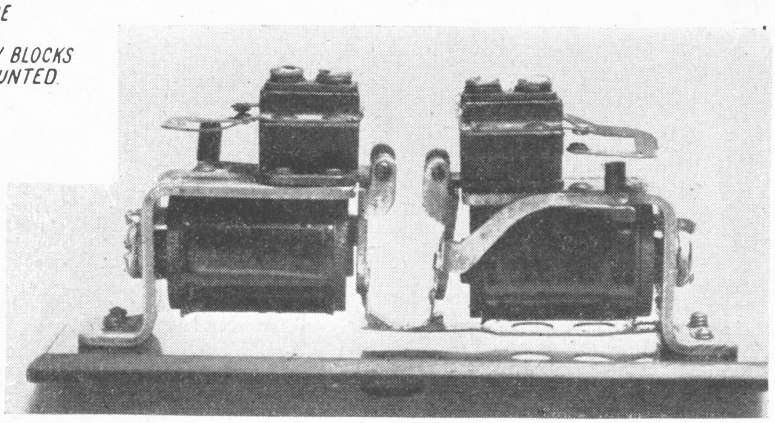
After cutting off the solder connection end of blade, Fig. 1, $\frac{1}{8}$ in. was bent at right-angles and the blade was then soldered to lower end of relay yoke, Fig. 2.

The extension-pieces were then soldered to the armatures leaving $\frac{1}{16}$ in. extending. I must mention here that all measurements I refer to are for the particular type of relays that I used, such as in the photograph. After the relays were mounted, "V" or locking blocks were shaped from $\frac{1}{16}$ in. square brass cut from from a scrap piece $\frac{1}{16}$ in. flat. These were made about half-an-inch long. This enabled them to be held with a pair of pliers while mounting, the spare not being cut off until final adjustment was made, and the relays were working perfectly.

The soldering of the "V" blocks to the locking blade was accomplished with the relays fully assembled, and a very slight gap was allowed between the cores and armatures to allow free movement of armatures when released.

Various slight adjustments had to be made to the relays I used, such as check clips slightly bent downwards to allow clearance of extension-pieces over "V" blocks, also adjustments of spring contacts. Here again this will depend on the type of relays used.

It is worth mentioning that no relays will operate with a snap action if the armatures are too far away from field of coil, so the mounting of the "V" blocks is of most importance, and requires a little patience.



The assembled self-locking relay

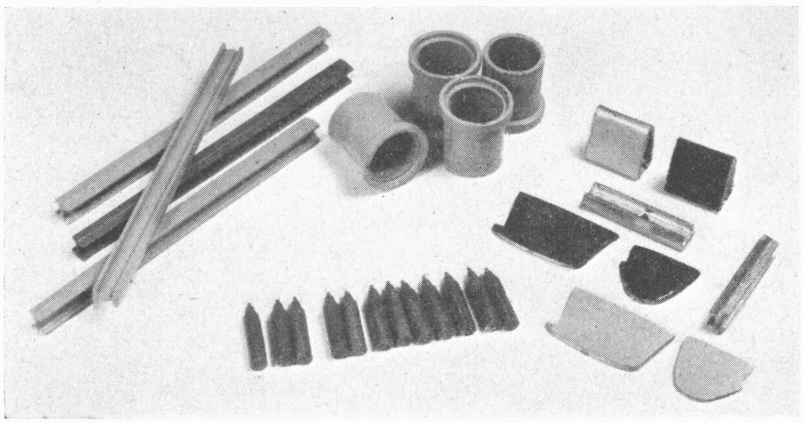
SURROUNDED by gleaming pillars and under a canopy of pastel pinks and greys, the second Model Railway Hobby Show presented visitors with a commendable impression of the Hobby Trade. The recently painted Hall, abetted by colourful stands and chromium fittings, added a touch of "Park Lane" to the event, but if the wilting representatives on the stands belied the sumptuous appearance of the Show, it was the heat, nothing else.

This was the first occasion that we have had of publicly meeting the recently formed REVELL GREAT BRITAIN LIMITED, who had a joint stand with BRADSHAW MODEL PRODUCTS. Those Revell plastic kits of aeroplanes, ships and cars are certainly of high standard and we are wondering what the future portends in the railway field.

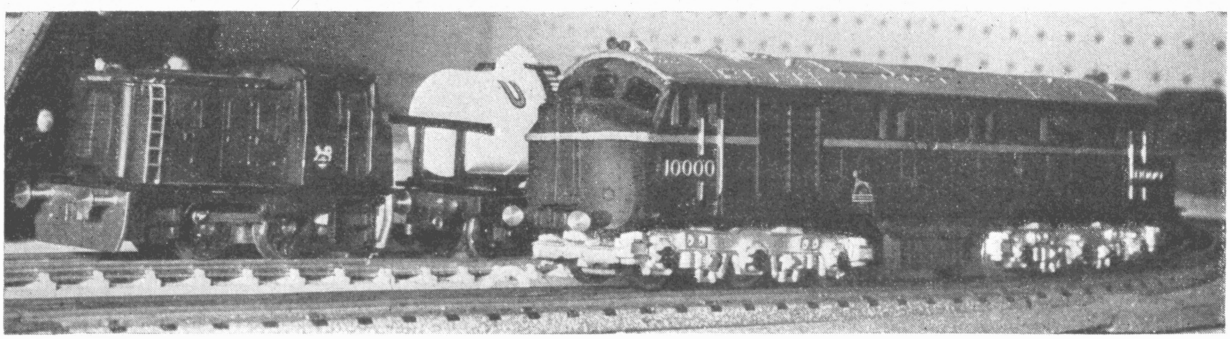
That Cinderella gauge—T.T. (12.5 mm.) has been given a real boost at last. Both GEM and KILLICK MODEL PRODUCTS were showing samples of track for T.T. gauge. In both cases the track follows the two production methods of the manufacturers. G.E.M. had a Kemtron 0-4-0 switcher hunting back and forth over a number of turnouts. Don't rush either of these firms though ; full production is not yet in progress. Whilst on the subject of track—we wish to amend a caption that appeared in the November issue. GEM's new point range in "OO" gauge does not include a 15 in. radius. This should have read 24 in. Our apologies to all those enthusiasts who besieged the G.E.M. stand during the show, to any who take Rhos-on-Sea by storm and, of course, to Mr. Mellor.

A nice shire horse in 7 mm. is available to "O" gauge enthusiasts and others from G. N. SLATER of Manchester. Finished in the colours supplied by Slater, this really looks the part (pass us the shovel). Talking of horses reminds us of loads and, in turn, of S. & B. PRODUCTIONS' latest line of wagon loads. If you are the type who studies every angle of railway modelling with meticulous care, these items have come into being just nicely for you. We have a set of H girders, precast concrete pipes, oxygen and acetylene cylinders and one mysterious package marked "Aircraft Salvage." This latter includes recognisable parts of a tailplane as well as short pieces of H girder, etc. An interesting assortment that will take scale accuracy a step further for the real "rivet head" addicts.

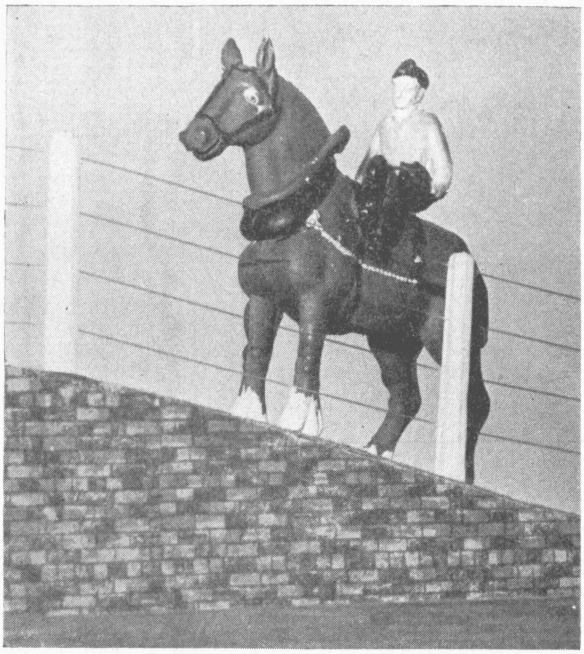
Some realistic running was provided by the old masters, BASSETT-LOWKE LTD., who had "O" gauge steam at work on their Stand. We are glad to say that this gauge appears to have taken on a new lease of open air life, and that a number of modellers have blazed the trail into the rhododendron bushes. Let us hope that those who have the space will keep up the good work. (Does anybody require a good surveyor's outfit ?) We mentioned the BRADSHAW/REVELL Stand earlier. We understand from B.M.P. that two new outside representatives are now calling on their customers. They are Mr. D. L. Stanley, of Romford, Essex, and Mr. B. Statman, of Leeds. We take this opportunity of wishing both of them every success. Mr. W. Greer, who has been representing B.M.P. for some eighteen months will be calling upon customers in Yorkshire, Lancashire and the North-Eastern districts. From the same source we understand that there have been price increases on those two grand American magazines, *The Model Railroader* and *Trains*. Actually, the increases came into effect at the beginning



S. & B. Productions have marketed these loads in 4 mm. scale. H girders, precast concrete pipes, acetylene cylinders and aircraft salvage



Kirdon Electric Ltd. had these two diesels working throughout the show. A number of other traders were operating similar layouts and the total mileage was considerable



The 6B4 controller-power unit by Jennings of Bexleyheath. This unit can be plugged into a second unit, the 6B4 "Plus," to extend operations

Left : One of G. N. Slater's latest items. A 7 mm. scale horse. The rider is separate

of October. Subscriptions for one year are now 42s. ; two years 79s. and for three years 108s.

We feel that the Hobby Trade has consolidated its position considerably by this year's joint Show. The fact that modellers are given the opportunity to inspect the majority of products that are available to them in this country under one roof is, in itself, of inestimable value, particularly to the beginner who must find our Hobby rather confusing when he first leaves the fixed track base period behind.

* * *

Sitting in a palatial cinema in the basement of one of London's biggest commercial houses we had the pleasure of viewing a short instructional film made by SHELL-MEX & B.P. LIMITED in association with other companies. The film was entitled " The Diesel on Rail," and prior to its viewing we were rather amused to learn that even an organisation the size of SHELL-MEX & B.P. admitted an affection for the old steamers. The emphasis of this particular evening fell on the word " old," for the purpose of the film was to bring railway staff up to date with the intricacies of the question of fuel storage and supply for diesel locomotives and the principal argument put forward for the speedy development of diesel traction in this country was the necessity of arriving at a proper balance of use of fuel reserves in Great Britain, coal being " out of the question." The film demonstrated the efficiency with which Shell-Mex and other companies are tackling both the problem itself and that of getting the information over to the subsequent users of the fuel and equipment, but we can only say we are glad that it was not a general debate, for, although somewhat awed by the presence of so many knowledgeable persons, we felt our blood pressure rising at some of the statements made about steam.

* * *

We have recently listened to some gramophone records produced by TRANSACORD LTD., Bledlow Road, Princess Risborough, Bucks. The present set comprises seven double-sided 10-inch records which can be played on any type of reproducer at the standard speed of 78 r.p.m.

The recordings are excellent, though some are better than others ; they cover an extensive selection of locomotive and other sounds recorded in various places, thus : Birmingham-Leamington, Leicester-Marylebone, London (Euston), Venice-Mestre, the Lickey Incline (including "Big Bertha"), Wolverhampton-Paddington and other well-known spots.

In our view, the best of the series is a recording of a Class A3 Pacific starting from Leicester and arriving at Marylebone, with certain other easily recognisable sounds en route ; but other people may prefer some of the other records, all of which are entertaining to the enthusiast. The records are available only from TRANSACORD LTD., as above, price 10s. 6d. each, plus postage.

FOR THE BOOKSHELF

Locospotters' Annual, edited by G. F. Allen. (London : Ian Allan Ltd.) 64 pages ; 7 in. × 9½ in. Coloured frontispiece and numerous other illustrations. Price 6s. net.

The locospotter, who, true to his hobby, spends most of his spare time at some convenient vantage point spotting the names and numbers of locomotives that pass within his view, will find this annual, like its predecessors, full of articles and pictures that can hardly fail to widen his " railway " interest. The articles, written in plain, simple language, deal with many different kinds of railway matters, past, present and even future, designed to provide an insight into railway working. It is really good.

Trains Annual, edited by Cecil J. Allen. (London : Ian Allan Ltd.) 96 pages ; 7 in. × 9½ in. Fully illustrated. Price 10s. 6d. net.

This is the eleventh edition of the most eagerly-awaited of annuals, especially by railway enthusiasts of all ages. The eleven articles in it cover a wide range of interests, as usual, historical and topical. The printing and general production are fully up to the high standard that has been maintained during the years, while the illustrations, including a coloured frontispiece depicting the Royal Train headed by the Stanier Pacific No. 46244, *King George VI*, are well varied and attractive. Altogether an excellent gift book.

The Railwayman's Diesel Manual, by William F. Bolton. (London: G. H. Lake & Co. Ltd.). 96 pages, 5 in. by 7 in. Price 7s. 6d. net.

At the present time, when the diesel engine is being more and more developed as a motive power unit for railways, an urgent need arises for an informative, practical handbook for the use of all the railwaymen concerned with the design, construction, operation and maintenance of diesel engines. This book admirably meets the requirements, and is to be warmly recommended, not only to those readers for whom it is primarily intended, but to anyone else who is in any way interested, or concerned with the diesel engine.

Written by an acknowledged expert on the subject, the book comprises ten chapters, each devoted to some particular aspect and written in a style that can be very easily understood, even by the veriest tyro of an engineering student. The text is extremely well illustrated by many drawings, halftones and diagrams of all the parts and every type of diesel now met with on the railways. It is the sort of book that seems destined to become a little classic of its kind.

EDITOR'S MAILBAG

● Letters of general interest are welcomed. A nom-de-plume may be used if desired, but the name and address of the sender must accompany the letter. The Editor does not accept responsibility for the views expressed by corespondents.

G.N.S.R. P.B.V.s

DEAR SIR,—I read with interest Mr. Iain Smith's article on G.N.S.R. six-wheeled P.B.V.s and also the correspondence arising from it. Although I have never seen the vehicles in their original state, I have made a study of things Great North, with the valued assistance of the British Railways, Scottish Region.

Six vans of the type shown were built and all were equipped with dual and hand brakes, electric and oil lighting and steam heating. All were built by the G.N.S. at Inverurie and weighed 15TOC.

1912 : 72.73 LNE 753, 754 (753 scrapped 1951).

1913 : 74.75 LNE 755, 756 (756 scrapped 1938).

1915 : 2.71 LNE 72, 752.

As can be seen from the above list, Mr. Smith's LNE prefix number scheme applies to only one of the six vehicles, and judging from the rest of my GNS list this is generally applicable. The reason was that the Great North did not number coaches in sequence, but gave separate sets—1 upwards—to each type. Thus No. 1 applied to 1st, compo, 3rd, P.B.V., saloon, G.B.V., horse box, carriage truck, wagon and vitriol tank alike ! To add 7 as a prefix was quite out of the question.

I do, however, agree with Mr. Smith on the question of end plates and little trust can be placed on them when it is a question of exact measurements. I append some details of G.N.S.R. livery, circa 1912, though for Mr. King's information, E. F. Carter's book gives an overall picture.

Yours faithfully,

Rutherglen. JOHN A. N. EMSLIE.

ARTICULATION

DEAR SIR,—I was most interested in Mr. H. A. Robinson's recent article on " Articulated Coach Stock," as a result of which a three-coach set has been successfully converted to an articulated set. The smooth, firm running of this set is most satisfactory and has amply repaid the small amount of work involved. The old problem of buffer locking has thus been solved once and for all !

I decided that it would be a convenience to avoid any permanent attachment of the bogies to the coaches since all three coaches would need to be lifted together to avoid risk of distorting the linking bogies. The method I adopted was to use the excellent " Exley " bogies which are ideal for the job. The flat top plate of these bogies makes it an easy matter to solder a piece of $\frac{1}{8}$ in. brass plate to the upper surface, the two pivot holes being drilled as described by Mr. Robinson. A suitable nail was driven into the coach floor, protruding downwards. The coach end was then located on the flat bogie plate and the nail allowed to pass down through the pivot hole. The coach thus rides freely on the bogie under its own weight and no springs were employed. I have found this method entirely satisfactory, and it has the advantage that each coach can readily be lifted clear, when desired, leaving the bogies on the track, which, after all, accords with full scale practice.

Yours faithfully,

Chalfont St. Peter. J. C. BAKER.

COATS :	2 Primers 4 Filling 1 White/3 cream (top) 1 Brown/3 lake (bottom) 3 Varnish
ROOF :	Light grey
END UNDERFRAME RUNNING GEAR :	Black
BODY :	(*a*) Roof to waist line (3 panels) Cream (1 white/3 cream) Oval door vents and board brackets Lake (1 brown/3 lake) (*b*) Waist line down (1 panel) Lake
LINING : (edge of moulding)	All panels—$\frac{1}{4}$" red/$\frac{1}{4}$" yellow/$\frac{1}{4}$" red At waist line—cream/$\frac{1}{4}$" red/$1\frac{1}{2}$" vermilion/lake
BOARDS :	5" wide—lake, edged $\frac{1}{4}$" vermilion Block letters $2\frac{1}{2}$"—3"
SIDE LAMPS :	Red
DOOR HANDLES COMMODE RAILS :	Polished brass
CLASS :	" G.N.S.R.," " No. 66," " GUARD," " LUGGAGE " on waist panel in gold, shaded red and brown to right

ARTICULATION

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Yours faithfully,

Chalfont St. Peter. J. C. BAKER.

AN AWKWARD SUBJECT OVERCOME ?

DEAR SIR,—I seem to remember that on more than one occasion in the fairly remote past there has been some discussion in the columns of MODEL RAILWAY NEWS on how to reproduce in 4 mm. scale the narrow louvres on the sides of G.W.R. " Siphons." More than one method was described but I am not aware that any degree of finality has ever been reached on the subject, or that any commercial product is available to facilitate this form of construction.

Well, in turning the pages of Bassett-Lowke's latest model shipping and engineering catalogue I have noticed, on page 11, that this firm supplies a strip grating, in plastics, with 32 slots, or grooves, to the inch for use on model ships. According to a drawing I have before me the louvres on Siphon C (and, presumably, the other Siphons) appear to run at about 36 to the inch in 4 mm. scale. The difference, I fancy, would not constitute a very serious discrepancy, or be likely to be noticed.

I have not seen the product, only the picture of it in the catalogue, but I venture to pass the notion on for the information of anyone who may care to investigate.

Yours faithfully,

London, W.1. JOHN AHERN.

" O " GAUGE EQUIPMENT

DEAR SIR,—May I draw the attention, through the medium of your journal, of all modellers in gauge " O " to the recently formed Gauge " O " Guild which can show promise of growing into a flourishing society, provided we can count on the support of all gauge " O " enthusiasts in the country.

It is the aim of the guild to provide news, information on all subjects, and to increase the numbers of articles in the model journals. This latter is, of course, subject to the editors' approval, and full details of the guild's activities can be obtained from the Hon. Secretary, H. F. Bower, 81, The Drive, Bexley, Kent.

As a beginning we wish to compile a comprehensive list of stockists and manufacturers of gauge "O" components and equipment, including amongst the latter those who are willing to supply castings, wheels, and to produce special items, provided orders of sufficient quantities are forthcoming. So with this appeal to the trade for their co-operation, which I am sure will be forthcoming, I would request all correspondence on this subject to be sent to me at the following address:—"Smallridge," 38, Chatham Avenue, Hayes, Kent.

Yours faithfully,

Kent. A. J. FRASER,
Hon. Publicity Officer,
Gauge "O" Guild.

LONDON'S RAILWAY TAVERN

This well-known hostelry opposite Liverpool Street and Broad Street station entrances, in Liverpool Street, London, has recently been rearranged and redecorated, to impart a truly railway atmosphere, at least to the saloon bar, by the display of some models of locomotives and rolling stock, many prints and photographs, together with a collection of 25 crests of pre-grouping railway companies. The entire effect cannot but appeal strongly to railway enthusiasts and stimulate interest in those who do not normally take any special notice of railways.

This unique and historic display was formally opened on October 30th, by Mr. J. N. Maskelyne, in the presence of a distinguished company of guests, including representatives of the managements of Whitbread & Co. Ltd. and of Bass, Ratcliffe & Gretton Ltd., joint owners of the premises; the British Transport Commission, who assisted in collecting the exhibits; Richard Lonsdale-Hands Associates, design consultants, who planned the redecorations, and a number of members of prominent societies and editorial staffs of railway periodicals. It was a happy occasion that seemed to auger well for the venture. There is nothing exactly comparable with it elsewhere, so far as we know. It is a permanent display that can easily be enlarged, if necessary, in the future; but there is enough of it to ensure that this Railway Tavern will become a renowned resort for enthusiasts, visitors to, or residents in, the London area.

WITH THE CLUBS

THE MODEL RAILWAY CLUB

The club meets twice only in December, one meeting being the annual social at Caxton Hall for members and their friends, the other, on Thursday, December 20th, being a track night at the clubroom, Hammersmith (Piccadilly Line) Station, to which all visitors are welcome.

Enquiries—Hon. Secretary: D. A. BOREHAM, 10B, Ealing Road, Northolt, Middlesex.

SUNDERLAND & DISTRICT MODEL RAILWAY CLUB

Early in the year we were obliged to abandon the lock-up shop at Harbour View, due to the increase in the rateable value applicable to business premises. Very soon afterwards we were granted the use of an office each Monday night, in order that we may hold together until suitable permanent premises were found. Recently we have acquired very spacious and comfortable clubrooms at 2, Hill Street, Hendon, Sunderland. Our new premises enable us to offer a greater variety of club activities, as we have ample space in which to erect three working layouts. A portable ten-foot square "OO" gauge 2-rail layout, an eight by four foot "OO" gauge 3-rail layout, and a fourteen-foot "O" gauge stud-contact test-bed. We can also enjoy the luxury of a separate committee room and reference library. The carpenters have completed the 10 ft. by 10 ft. baseboard, and tracklaying is well in advance of schedule. They have now directed their activities upon the smaller layout, and also to the shelving for the reference library, after which they will make a start on the test-bed. At the first Annual General Meeting, held at 31, Darien Avenue, the election results were as follows:—Dave Ainger, president; Ray Lofthouse, secretary and treasurer; Ernie Parkin, vice-president; Joe Taylor and Ray Parkinson, auditors. We welcome application for membership all the year round, and anyone without a personal layout need have no hesitation in contacting us.

All correspondence should be addressed to R. LOFTHOUSE, Secretary and Treasurer, 31, Darien Avenue, Fulwell, Sunderland, Co. Durham. The age limits for the Junior Section are 15 to 18 years. The club is an associate member of The Association of Model Railway Clubs.

THE ASSOCIATION OF MODEL RAILWAY CLUBS

The annual general meeting will be held in London on Saturday, January 26th, 1957. Details of the meeting place will be announced later when it is known how many are likely to attend. Each club has one delegate but any number of visitors may attend. Clubs are asked to notify the association secretary as soon as possible of the approximate number they expect. Postal or proxy votes are admissible, and clubs are advised to decide in good time on the method they wish to adopt.

The Association's stand at the recent Model Engineer Exhibition was very successful. Several affiliated clubs displayed models and photographs, and contact was made with old friends and new. Many enquiries about membership were received.

From the number of unattached modellers who asked for information about local clubs, it is obvious that there is a great need for the register of clubs which the association is compiling. It is in the interest of every club, whether affiliated or not, to advise the association of the name and address of its secretary and particulars of its meeting place.

Hon. Secretary: H. H. POWELL, 27, Glebe Way, West Wickham, Kent.

THE GAUGE "1" MODEL RAILWAY ASSOCIATION

The annual general meeting of the association will be held at the London headquarters of the Model Railway Club, by kind permission of the club, on December 8th at 3 p.m. Following the formal business, a track session will be held, and facilities will be available for both steam and electric running. It is hoped that as many members as possible will take this opportunity of giving their rolling stock a proving on the association's track.

All enthusiasts interested in gauge "1" will be welcome at this meeting, and they are invited to contact the Hon. Secretary: J. T. VAN REIMSDIJK, 40, Bancroft Avenue, London, N.2, for further particulars.

WEST WICKHAM MODEL RAILWAY CLUB

A limited amount of running is now possible on club layouts and a programme of talks has been arranged for the first half of the winter season.

A film show will take place on December 10th. The next club exhibition will be held in Beckenham on May 25th.

The club meetings are held every Monday and alternate Fridays at the clubroom, The Hard Courts Club, The Grove, West Wickham, and full details may be obtained from the Hon. Secretary: J. D. WILLIS, 9, Greenways, Beckenham, Kent.

BIRMINGHAM MODEL RAILWAY CLUB

The social and annual exhibition will be held on Saturday, December 15th, at St. Thomas's Secondary Modern School, Granville Street, Birmingham, from 3.0 until 7.0 p.m. Other meetings will be on December 6th and 12th for 8 mm. construction work, and also held at the school.

Hon. Secretary: G. R. DRIFFIELD, 5, Plough & Harrow Road, Edgbaston, Birmingham, 16.

THE BOURNEMOUTH MODEL RAILWAY SOCIETY

The above society, which is affiliated to the Association of Model Railway Clubs, has been holding meetings regularly since the end of August at 7.30 p.m. on the 1st and 3rd Fridays in each month, at Branksome Methodist Hall (next to Branksome Station). It is hoped that the society will have a permanent H.Q. in the near future.

The programme of the society from December, 1956, to April, 1957, is as follows:

Dec. 7th. Film show.
Dec. 21st. Social and private exhibition.
Jan. 4th. "Growing a Locomotive" by J. Beeson.
Jan. 18th. Talks and questions answered by three members of the staff of British Railways.
Feb. 1st. J. Beeson will answer questions arising from his lecture of Jan 4th.
Feb. 15th. "Coach Construction" by H. J. Joslin.
March 1st. "Prototype and Models" by R. B. Gossling.
March 15th. "Railways of Switzerland" by D. G. Yule.
April 5th. Annual general meeting.

Hon. Secretary: D. G. YULE, 23, Elmsway, Southbourne, Bournemouth, Hants. Tel.: Southbourne 47728.

WIMBLEDON MODEL RAILWAY CLUB

The programme for December is: 12th—"Great Eastern Railway" by J. Gardner.

Visitors and prospective members are welcome to our meetings held at 32, Worple Road, Wimbledon, S.W.19. Information from Hon. Secretary: S. NUTTMAN, 342, Durnsford Road, S.W.19.

THE RAMSGATE & DISTRICT MODEL CLUB

The annual general meeting of the club took place at the club's new premises in Effingham Street (rear of the fire station), Ramsgate. R. Cobb, the treasurer, reported that the club was in a sound financial position, but said that ten more new members were needed to keep it on a solvent basis. There is a reduced subscription for any member living outside an 8-mile radius of the club's premises. The club had, however, done extremely well during a difficult year, without the help of extra income from an exhibition as held in previous years. E. Church, the club's energetic secretary, was elected president by unanimous approval, and during the evening Mrs. Church presented the awards to the winners of the club's annual competitions.

All who are interested should come along on Wednesday or Friday evening when the club is open from 7.30 to 9.30.

Hon. Secretary: E. CHURCH, 14, St. Mildred's Avenue, Ramsgate.

HULL MINIATURE RAILWAY SOCIETY

Dec. 6th Track night.
,, 13th Annual photographic competition.
,, 20th Track night.
,, 27th No meeting.
1957
Jan. 3rd Track night.
,, 10th ,, ,,
,, 17th The annual dinner.
,, 24th Operation night. Members' own rolling stock.
,, 31st Track night.
Feb. 7th Ten minute talks.
,, 14th Track night.
,, 21st Operation night. Members' own rolling stock.
,, 28th Track night.
Mar. 7th Discuss summer programme and public exhibition.
,, 14th Track night.
,, 21st Gradient climbing tests and operation night.
,, 28th Track night.
April 4th Auction sale. The annual turnover of surplus equipment.
,, 11th Operation night. Members' own rolling stock.
,, 18th Track night.
,, 25th Annual general meeting.

Hon. Secretary: E. A. HOOLE, 26, Vermour Street, Hull.

HITCHIN & DISTRICT MODEL ENGINEERING CLUB

Forthcoming events are:—

Dec. 7th Members' own photographs.
,, 20th Club rummage sale.
1957
Jan. 3rd Lecture "Isle of Wight Railways" by Mr. E. Keith.
Feb. 7th Films by the Petroleum Films Bureau and the Hunting Aviation Group.
,, 28th Annual general meeting.
Mar. 7th Lecture "Some of my best photographs" by O. Wilman and the Brothers Frost.

Some visits to places of interest are likely some time early in the New Year, but, at present, no details are available. The club extends a big welcome to prospective new members and visitors.

Details of the club and its activities are available from the Hon. Secretary: G. CLARK, 36, Railway Street, Lower Stondon, Henlow, Beds.

MERSEYSIDE MODEL RAILWAY SOCIETY

At the annual general meeting held in September, the following members were elected to serve as a management committee for the twelve months ending September 30th, 1957.

Chairman: F. W. S. Shaw; Hon. Secretary: A. L. Eagles, 38, Silverdale Road, Bebington, Wirral, Ches; Hon. Treasurer: W. K. Nicholas, 12, Rose Mount Drive, Wallasey; Hon. Editors: B. H. Mitchell and T. G. Walsh; Programme Secretary: R. J. Hunter; Librarian: A. B. Williams.

These members will serve the society to the best of their ability and will give careful consideration to comments, suggestions and criticisms from the rest of the membership. As the society is now without an "O" gauge layout, immediate indications as to future policy will be welcomed from parties interested in this gauge.

One of the facets of the Birmingham Conference is the collection of models that come from all parts of the country. This picture by Adrain Le Mottee shows an interested gathering watching a demonstration of the Alex Jackson coupling system

Meetings open at 7.45 p.m. at the Grenville Cafe, Tithebarn Street, Liverpool. The room is, of course, available from 7.0 p.m. for chatter. At the time of going to print, details of the individual programmes are not known, but they will be up to our usual high standard.

Hon. Secretary: A. L. EAGLES, 38, Silverdale Road, Bebington, Wirral, Ches.

THE BRISTOL RAILWAY CIRCLE

Saturday, December 1st—7.30 p.m. Judging of entries in the photographic competition. This year we welcome as judge, Mr. G. H. Soole. The contest has been reorganised into two sections only, for members over 21 and under 21.

Saturday, December 15th—7.30 p.m. Christmas Social.

Further details will be given on the Circle blackboard or on application to the Hon. Secretary: J. F. BURRELL, 80, Longmead Avenue, Bristol, 7.

THE EDINBURGH & LOTHIANS MINIATURE RAILWAY CLUB

At the annual general meeting of the club the following new office-holders were elected:

President: Sir Eric A. O. Hutchison, Bart.; Chairman: K. Northwood; Hon. Secretary: R. P. M. T. Barrett; Hon. Treasurer: D. K. Craighead.

December 13th, 1956. Reminiscences over 40 years of repairing motor vehicles, J. H. Farr.

January 16th, 1957. Film show and refreshments, J. H. Farr.

February 19th, 1957. Lantern slides of trains, etc., D. A. Kelso.

March 19th, 1957. Question box.

April 1st, 1957. Annual general meeting.

THE FARNBOROUGH MODEL RAILWAY CLUB

Owing to D. L. Jenkins's migration to Australia early in October, it has been found necessary to elect a new hon. secretary. With immediate effect, therefore, the duties of secretary are being taken over by K. T. Watts.

At a club meeting on Thursday, September 27th, Mr. Jenkins (Dave, to his many friends) said that although sorry to be leaving Farnborough and the club, in which he has held the post of hon. secretary continuously since its inauguration in 1951, he hopes to continue modelling when settled in his new home down under. A vote of thanks was proposed for the good work Dave has done during the past five years, and he was unanimously elected as an hon. member of the club. Also, it was decided at the same meeting that the club's "O" gauge layout is to be rebuilt for end to end running, with provision made for possible future extensions.

Work on the club "OO" layout is to be speeded up, and during the coming winter it is hoped to hold film shows in the club room, and to organise outings to London shows—more details later.

We still have room for new members, and anyone interested please apply for details to the new Hon. Secretary: K. T. WATTS, 26, Fleet Road, Farnborough, Hants.

ORPINGTON AND DISTRICT MODEL RAILWAY CLUB

The club year commenced on October 5th. Work is progressing on new "O" and "OO" gauge layouts in anticipation of an exhibition in September, 1957.

Meetings continue to be held at 8 p.m. on Fridays, Platform 1, Chislehurst Station, Chislehurst, Kent.

Hon. Secretary: R. CLARK, 163, Poverest Road, Orpington, Kent.

SHEFFIELD MINIATURE RAILWAY SOCIETY

The club has now moved to new premises at 6, Crescent Road, Sheffield, 8. Meetings are at present held each Friday evening at 7.30. Facilities for running "O" and "OO" gauge will be available.

Prospective members are welcome to visit us any Friday evening.

For full details please write to Hon. Secretary: R. WARRINGTON, 24, Olivet Road, Sheffield, 8.

NORTHOLT MODEL RAILWAY CLUB

The club has now completed its summer season and held its second annual exhibition which was a success.

The "O" gauge section have erected nearly all the baseboards for their layout. The two-rail section have completed their main oval and are able to run on it. Signalling and electrical interlocking is being installed on the stud contact layout. New members would be welcome.

Enquiries to Hon. Secretary: J. F. MATTHEWS, 63, Hunters Grove, Kenton, Harrow, Middx.

CORRECTION

In the October issue, we referred to a model by Mr. B. Wright as a 4 mm. scale L.S.W.R. Adams 4-4-2 tank (page 259). This should have read $\frac{3}{16}$ in.-1 ft. (S. gauge). Sorry, Mr. Wright.

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Whilst every care is taken to exclude advertisements from doubtful sources, no responsibility can be accepted by the publishers for the bona fides of advertisers.

The Sports Dept. (Manchester) Ltd., for new and second-hand Gauge "O" and "OO" locos. and access. Trix rails, 1s. each. Double transformers, new, 30s. Gauge "O" trucks from 2s. each. Clk. rails, 4d. and 6d. each. Points, 2s. 6d. each. Large stocks of new Tri-ang model railway. Hornby "OO" and Meccano. All sport equipment. Toys and games. WE PURCHASE second-hand locos. and access. Gauge "O" and "OO," Golf clubs and all sport equipment. Send your goods for disposal on to us for quotation.—4/10, Princess Road, Moss Side, Manchester, 14. Tel.: MOS 1757.

Staffordshire Model Shop since 1936. Model railwaymen always welcome. New "OO" layout.—J. W. BAGNALL, South Walls Road, Stafford. Tel.: 420. M.E.T.A.

Handyman's Shop, 27, Blakey Moor, Blackburn. Stockists of Wrenn, Tri-ang, Walkers & Holtzapffel, Gem, Nucro, Peco accessories. (M.E.T.A. dealer.)

"OO" 10½ Gauge. All types of models bought, sold and part exchanged. Lists-stamp.—MODELS (CITY) LTD., 2, The Arcade, E.C.2. Avenue 5759.

Birmingham—Bearwood Models for scale equipment—everything for the modeller. Wanted. Obsolete loco building kits; Zenith motors; scale models "O" and "OO."—53, Parade, Birmingham, 1, and 8, Three Shires, Oak Road, Smethwick, 41.

Rotary Converter for operating trains from d.c. mains. 230 d.c. input. 12-15 v 2½ amp d.c. output, fully suppressed, complete with leads and switch, 40s., post 3s.—ARTHUR SALLIS, 93, North Road, Brighton.

The Model Railway Encyclopaedia, by Ernest F. Carter. 461 diagrams. 128 photographs. Blueprints of 20 British locomotives. 32s. post free from HUDSON'S BOOKSHOP, Dept. B2, 116, New Street, Birmingham, 2.

American Publications. "How to Build Railroad Models," 15s. 9d.; "Model Cars & Locos," 8s.; "M.R. Cyclopedia," 46s. 3d. (post paid.) Year's subscription "Model Railroader," 46s. 6d. back numbers, 3s. 6d. (after December 1954, 4s. 6d.). Write for catalogue.—WILLEN LTD., (Dept. 42), 9, Drapers Gardens, London, E.C.2.

Hornby Dublo Trains, accessories for sale. S.A.E.—117, Church Street, Milnthorpe, Westmorland.

Watches, any make, repaired (with guarantee), post confidently to—YOUNG & SON, 133, London Road, Chippenham, Wilts.

For Sale. Railway books, tickets, guides, photographs, postcards, oddments, timetables (working and public), similar items for tramways. S.A.E. list.—Below.

For Sale. Gauge "O" locomotives, rolling stock, track by Exley, Beeson, etc. Discontinued lines, oddments, etc., in Exley coaches. S.A.E. list.—Below.

For Sale. Gauge "OO" Exley discontinued lines in coaches at reduced prices, Marklin track, overhead gear, Dinky toys, etc. All nearly new. S.A.E. list.—The Ridge, Baslow, Derbyshire.

Hornby Dublo Equipment for sale. Track, rolling stock, accessories, etc. S.A.E. for list.—R. EATON, 256, Wendover Road, Weston Turville, Bucks.

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We apologise to the many customers whose conversions and repairs have been the subject of delay. The amount of work received has been exceptional. All delivery dates are estimated as accurately as possible but cannot be guaranteed. Our standards of workmanship remain unimpaired and unequalled.

EAMES, 24, TUDOR ROAD STATION HILL, READING

"OO" G.W.R., L.M.S., M.R., G.E.R., L.S.W.R. and S.R. locomotives, £6 to £25. Exley coaches, wagons, track, books, S.A.E. please.—Box No. 8225, MODEL RAILWAY NEWS Offices.

Rokal and American T.T. parts and accessories. S.A.E. list.—SHELDON, Gorse Lane, Wrecclesham, Farnham, Surrey.

Lionel "O" Gauge Super streamline passenger set, excellent condition. Consists of three unit, two motored diesel engine and four passenger cars, track and transformer. Cost £60, will sell for £35.—SNYDER, 3, Clifton Close, Kettering, Northants.

Tinned Steel Sheets, 26 s.w.g., 20″ × 14″ 3s. 9d., 10″ × 14″ 1s. 10d., 7″ × 10″ 1s. Postage and packing, 9d. S.A.E. for full list.—RICHARDS, 57, Cardigan Road, Southport, Lancs.

For Sale. "O" gauge electric Bassett-Lowke "Princess Elizabeth," "Royal Scot," L.M.S. 0-6-0 tank, dining car, Royal Mail coach and trackside equipment and three passenger coaches, 4 goods wagons, also Hornby Pullman, 3 passenger coaches, 15 goods wagons. All in good condition. Also a quantity of steel rails and points. £36 the lot, separate offers considered.—BLACKWELL, 18, St. Leonards Road, Ealing, W.13. Phone: Perivale 7462.

Birmingham. Any Make of Loco and equipment, bought, repaired or exchanged, "O" and "OO." Sleepers 4 hole "OO," 1s. 6d. per 100. Rail plates, 2s. per 200, postage 6d.—MODEL SHOP, 90, Rookery Road, Handsworth, Birmingham, 21. Nor 6770.

Walthamstow, Comprehensive Stocks Anorma, CCW, ERG, GEM, Jamieson, Modelcraft, Peco, Percival Marshall, Ratio, Romford, S. & B., Trix, Wrenn, etc. Satisfaction guaranteed, call, write or phone. Stamp for by-return mail order bargain list. —V. E. PLANT, 101, Markshouse Road, Walthamstow, E.17. KEY 6896.

"O" Gauge Layout for sale. 65 yd. Milbro track, points, double junctions, etc., L.M.C. locos., various rolling stock, track parts, scenery. Condition almost new. S.A.E. for details.—MUSSON, The Red House, St. Ives, Huntingdonshire.

Gauge "O" Lowke, Mills, 12 volt engines, "Coronation Scot" and coaches. Whole or part. Reasonable offer.—"Cornwall House," Promenade, Bristol, 8.

Surplus Scale 16.5/18 mm. S.R./G.W. locomotives, coaches, wagons, kits, parts, blueprints, transformers, S.A.E.—Box No. 8195, MODEL RAILWAY NEWS Offices.

"O" Gauge Live Steam Mogul, B/L. New cylinders recently fitted, £5.—NEWELL, 79, Gowan Road, Alum Rock, Birmingham, 8.

Precision Instrument Cut Gears, number of teeth 138, 120, 91, 84, 80, 72, 60, 50, 26, 25, 23, 15, up to 60 teeth, price 1s., 72 up to 91, 1s. 6d., above 91, 1s. 9d. Matched worm and wheel, 36 to 1 reduction, 2s. 6d. per set, all suitable gauge "OO" and "OOO."—JOHNSON, 39, Bury New Road, Whitefield, Nr. Manchester. Postage 3d.

Hornby Dublo, Tri-ang, Rivarossi, Marklin, Fleischmann, Lionel, Exley and all popular makes bought, sold and exchanged. Send us your unwanted items along with your requirements. Complete layouts exchanged to another make. Also comprehensive range—Aeroplane, ship and marquetry kits. S.A.E. with enquiries.—MIDLOTHIAN MODEL RAILWAY SUPPLIES, Homecrafts, 10, Gillespie Place, Edinburgh, 10, Scotland.

Proprietors of Large Hall on the seafront of popular holiday town invite enquiries for the construction and management of working model railway or road car Exhibition to be staged from Whitsun to September, 1957. Terms will depend on amount of monetary help required. Write Box No. 8310, MODEL RAILWAY NEWS Offices.

One Express and One Tank Engine, 3 coaches, 20 goods wagons, 7 half straights, 2 whole straights, 16 curves, 5 signals, 4 points, 1 footbridge, 3 buffer stops, £20 or near offer.—BRIAN JARVIS, 41, Warwick Ave., Egham, Surrey.

May we send our Catalogue? Hundreds of W.D. and model engineers' items. Meters' Motors, Solenoids, Screws' etc., etc. Stamp Please.

ROGERS 31, NELSON STREET SOUTHPORT, LANCS

Bassett-Lowke old type tank locomotives, L.N.E.R. No. 382 4-4-0, £3. L.M.S. No. 1201 0-4-0, £2. Wanted. Gauge "O" Lionel equipment.—Box No. 8316, MODEL RAILWAY NEWS Offices.

G.W.R. 4 mm. 16.5 Stud Grange, £8. Pannier, £5. Coaches. Write details.—GOULD, 13, Kenilworth Avenue, S.W.19.

Trix Transformers. Station units. S.A.E. for list.—EVANS, 29, Orchard Way, Cheltenham Road East, Gloucester.

Tramcars 16.5 mm. Gauge, metal: six with motors, exhibition standard, for sale separately. S.A.E. list.—WALKER, 15, Hill Crest Grove, Erdington, Birmingham, 22C.

"OO" Scale Portable Scenic 2-rail layout, 7′ 0″ × 5′ 6″, 17 points, 2 controllers, Reidpath 4F wagons, £15.—74, College Road, Cheshunt, Herts.

For Sale. 16.5 mm. 2-rail Elkway track in good condition, locos, etc. List s.a.e. please.—WYATT, Starcross, Cranbrook, Kent.

"OO" New and S/H. Locos. All 2-rail. Coaches, etc. List s.a.e.—OSBORNE, 30, Grennell Road, Sutton, Surrey.

Seven Trix Trucks in good condition, 28s. — FOXWELL, Lychgate, Balcombe, Sussex.

"O" Gauge L.M.S. "Princess" Pacific, by Beeson. 12 volt d.c. surface contact, fully detailed cab, fittings, brake gear, etc., £125.—4, Bell Close, Pinner, Middlesex.

Marklin, Dublo, Farish Locos. S.A.E. details.—WITHERS, 11, Brighton Road, Aldershot.

Bassett-Lowke "O" Gauge. 12 v. transformer, 2 locomotives, carriages, stations, etc., 2 points, rails, turntable, £65.—57, Ross Road, S.E.25. Tel.: LIV 3994.

For Sale. "O" gauge coarse scale locos, 12 v. rolling stock, brass and steel track wheels, parts, railway books. Send s.a.e.—Box No. 8325, MODEL RAILWAY NEWS Offices.

Gauge "O" B/L 12 v. Locos, coaches, wagons, steel track, points, perfect. Cost £90, £50, o.n.o. S.A.E. details.—TAILBY, 75, Blandford Avenue, Kettering, Northants, 11.

"O" Gauge Lowke "Prince Charles" clockwork loco, practically new, £3. "O" gauge Super Enterprise, steam, £6. Double oval brass track, 9', 6'. Two scissors crossings, £7.—B. A. Wales, 43, East Parade, York.

For Sale. L.M.C. 0-4-4 Southern tank, cost £10, accept £7. New.—65, St. Thomas Street, Scarborough.

Good Gauge "O" Electric Train Set, would exchange for good "OO." Hornby preferred, or sell.—M. WALDER, 28, Burghill Road, Sydenham, S.E.26.

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7 mm. Scale 16.5 Gauge V of R, 2 coaches, 2 brake vans, 4 wagons, tank body, free-lance van and twin timbers.—Box No. 8326., MODEL RAILWAY NEWS Offices.

Marklin Railway: 2 locos, SK800, tenders, coaches, 60' track, transformer, points, etc., £15, o.n.o.—FUSSELL, 22, Barnfield, New Malden, Surrey. Phone 5912.

For Sale. Marklin "HO" 8 locomotives, 35 wagons and coaches, stud-contact track, overhead system, turntable, engine sheds, stations, signals, transformers, etc. Cost £250. Condition as new. For detailed list write to M. Z. CUTAJAR, 29, Amery Street, Sliema, Malta, G.C.

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"1" Gauge Electric G.N.R. "Atlantic" £12 10s. L.N.W.R. 4-4-2T, £7 10s. Coaches, tinplate, 30s. Vans, tinplate, 10s. Vans, wooden, 20s. Wagons, wooden, 15s. T.P.O., wooden, 50s. Pre-grouping, beautiful condition.—List s.a.e.—Box No. 8273, MODEL RAILWAY NEWS Offices.

For Sale. Trix loco and 3 coaches. 60 ft. flexible track, points, etc. Transformer and controller. All complete and in good order, £10.—LAWRENCE, Eastington, Northleach, Cheltenham.

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Lionel Gauge "O" 2-4-2 loco with tender and goods trucks. Transformer. Perfect condition.—Willow Hill, Park Close, Esher, Surrey.

"O" Gauge Bassett-Lowke, 200 ft. track, 11 various points, 2 engines, 3 coaches, 10 trucks, 4 hydraulic, 3 rail buffers, several accessories, electric, £27 10s. lot.—SMART, Whittlesford, Cambridge. Tel. Sawston 3374.

Gauge "O." Two Mills' L.M.S. coaches, £6 12s. 6d.; Lowke 8-10 v. "Royal Scot," £6 15s.; 4 v. 2-2-0 mechanism, 37s. 6d.; Hornby lever frames; L.M.S. and Nord tenders; 230 v. d.c. rotary converter with cabinet and transformer for all a.c. railways, £6.—Below.

Gauge "OO." 8-12 v. 3-rail scale 0-6-2T, 55s.; Hornby Dublo clockwork railway and components. Marklin items: 3-rail straight rails, crossings, points, Pacific body and tenders, Pacific train set complete. Trix items: 230 v. d.c. rotary converter, 75s.; r-c arm signals, 19s. 6d.; Diesel Flyer, £5 17s. 6d., pre-war couplings, uncoupler components and rolling stock. S.A.E.—Box No. 8295, MODEL RAILWAY NEWS Offices.

Gauge "1" Bassett-Lowke high pressure "Royal Scot," £35. L.S.W.R. high pressure "Urie" 4-6-0, £30. L.M.S. high pressure Mogul, £27 10s. All fitted axle-driven water pumps. Perfect condition.—Box No. 8296, MODEL RAILWAY NEWS Offices.

Gauge "OO" G.W.R. 0-6-0 pannier tank, Gem X-3 mech. 2-rail. Peco couplings. £4 or near offer.—Box No. 8297, MODEL RAILWAY NEWS Offices.

American H.O. and Rivarossi Locos and freight cars for sale. S.A.E. for list. Wanted Rokal Pacific.—WALTERS, 184, Hinckley Road, Leicester.

"OO" Gauge Road Transport Scale Model Kits. Range of over 30 different models. Send stamp for illustrated catalogue.—ASH PRODUCTS, Leiston, Suffolk.

Scale Model 2-rail "OO" gauge complete layout for sale. 27 locomotives and all rolling stock. Complete or in lots.—Box No. 8298, MODEL RAILWAY NEWS Offices.

Gauge "1" Lowke Flying Scotsman, tinplate L.N.W.R. coaches, etc.—"Farcroft," Grosvenor Road, Colwyn Bay.

For Sale. Quantity of "O" gauge track, rolling stock and equipment. Also large number o magazines.—Box No. 8300, MODEL RAILWAY NEWS Offices.

Gauge "O" Model Railway. L.M.C. Bassett-Lowke. 12 volt locos rolling stock, track, etc. Offers. S.A.E. list.—PRESTON, 106, Wakefield Road, Normanton, Yorks.

For Sale. Model "O" gauge second-hand clockwork train, one Bassett-Lowke 4-4-0 loco, one Hornby loco, one 4-4-2 loco, 37 straights, 36 curves, 2 crossovers, 4 sets points, 10 wagons and carriages, station, level crossing, turntable, etc. For sale one lot only, £13. Apply ROBERTSON, Flat 4, 8, Orme Court, W.2.

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Free Price List of accessories for "OO" gauge layouts.—A.C.M., 24, Granville Road, Hove. Postal business only.

Gauge "O" Locomotives, clockwork, electric, rolling stock, track, crossovers, mechanisms, bodies, accessories, clearing cheap.—S.A.E. for list.—Box No. 8306. MODEL RAILWAY NEWS Offices.

For Sale. Complete Trix Layout, six locos, rolling stock, 25 points, over 200 lines, 2 transformers, 5 controllers, Cost £150, will sell complete £75, o.n.o. or split, S.A.E. for list.—R. N. BROWNFIELD, Admiral Superintendent's House, H.M. Dockyard, Devonport, Devon.

For Sale. "OO" locos, coaches, wagons, track. 2-rail. S.A.E. list.—F. DAVIS, 34, High Street, Highworth, Wilts.

"Dublo" Pre-Nationalisation Duchess and tank locomotives, carriages, trucks. Mint condition, Farish "King," "Merchant Navy" new. S.A.E. list.—Box No. 8327, MODEL RAILWAY NEWS Offices.

WANTED

Powerful Steam Loco Wanted.—D. BRERETON, 21, St. Michael's Grove, Fareham, Hants.

Wanted. Marklin Locomotives, Cars, Trams in Gauge "O," "1," "11," "111"; also catalogues, Gauge "1" locos "Lady of the Lake," "Lord of the Isles," "Charles Dickens," "Rocket," "Sir Alexander," "Pilot"; early dockyard model loco "Earthquake," Offer cash or items in Gauges "O," "S," "HO" and "TI."—WALTER S. POPEK, 16, Main Street, Garfield, N.J., U.S.A.

Caledonian and Highland Engines and goods and passenger rolling stock in "O" gauge. Also West Coast joint stock.—Box No. 8149, MODEL RAILWAY NEWS Offices.

Lowke "Super Enterprise," reasonable condition.—SHAW, 50, Edgcumbe Avenue, Newquay, Cornwall.

B/L Pre-war "Castle." Tinplate G.W.R. brake, 3rd. 2-6-4 tank.—STEVENTON, "Stennels," Quinton, Birmingham.

Wanted. Gauge "O" G.W.R. Bassett-Lowke "George V," L.M.S. 2-6-0 No. 1300, and Hornby "County of Bedford" clockwork. Good price paid for first-class models.—The Ridge, Baslow, Derbyshire.

Wanted. Bonds 12 V. G. "O" mechanism. Also Myford long cross-slide or similar.—Cox, 73, Warwick Way, Victoria, S.W.1.

Gauge "O" L.M.R. Tank. Also carriages, goods, wagons, signals.—South Lodge, Hurstpierpoint.

Half List Price plus postage offered for anything Dublo, Tri-ang, Rivarossi, Dinkies, Supertoys, army vehicles, etc. New condition only.—CRAVEN, 128, Rotherham Road, Maltby.

Bassett-Lowke Gauge "O." All brass electric (centre rail) points, turnouts, crossovers, double junctions, *particularly* diamond-crossings. Must be immaculate. State measurements or trace outline. Private advertiser. No dealers.—BOURNE, P.O. Box 2, London Airport.

Hornby "O" Electric Points, one l.h., one r.h.—BLABER, 122, Bessborough Road, Harrow, Middlesex. (BYRon 2615.)

B/Lowke 2-6-4T Clockwork. Must be as new.—NICHOLSON, Wanganui, Dargle Vale, Bray, Ireland.

Wanted. Farish L.M.S. tender with motor. Farish Pullmans. — WILMAN "Grindleford,' Blackhorse Lane, Hitchin, Herts.

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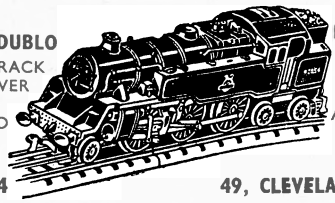

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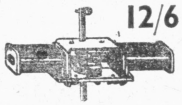

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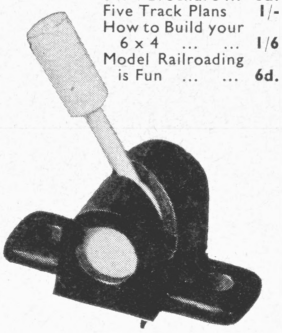

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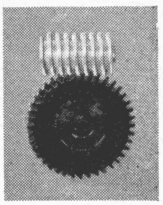

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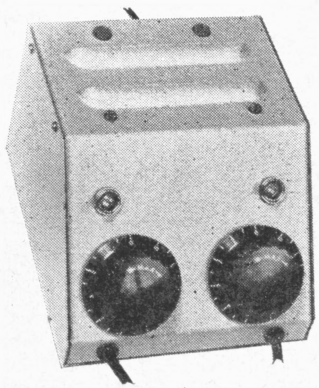

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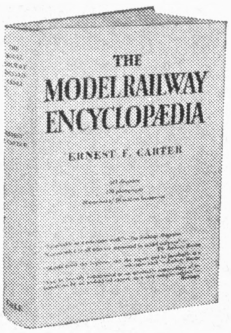

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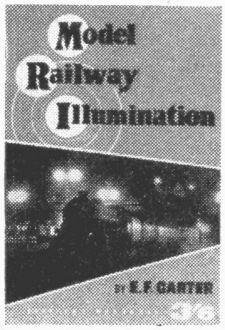

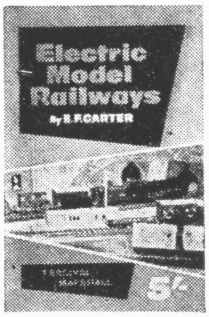

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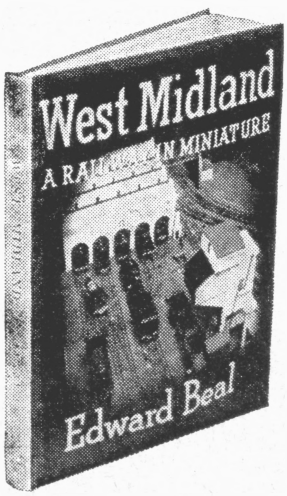

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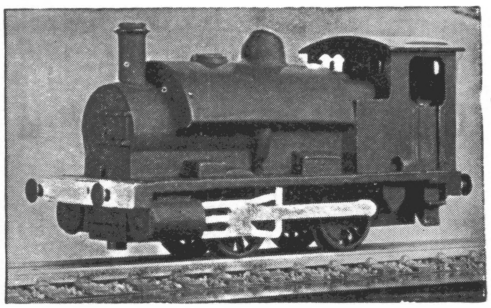

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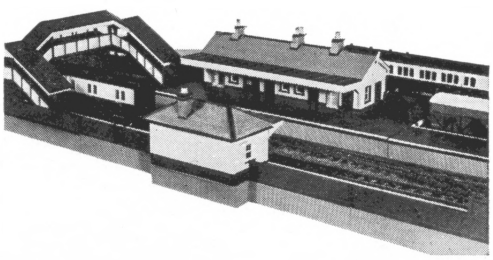

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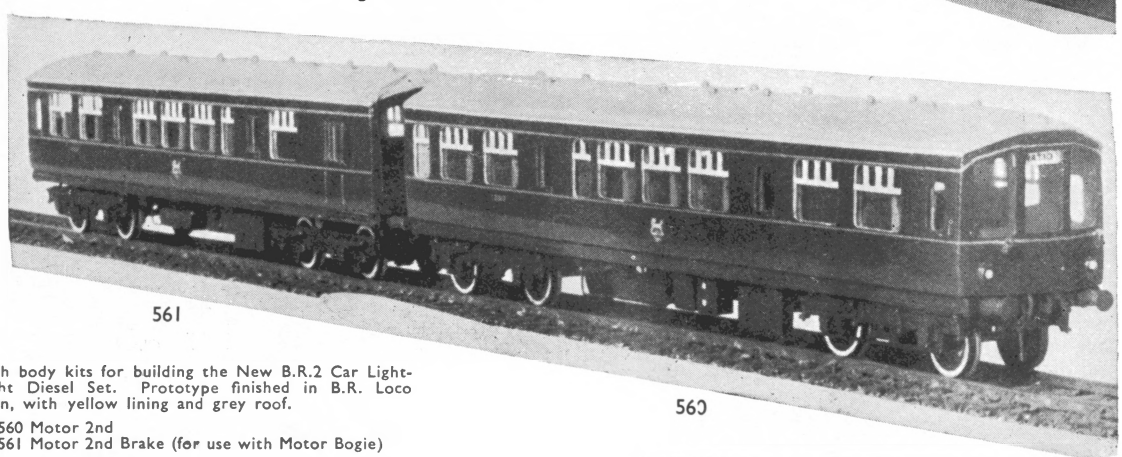

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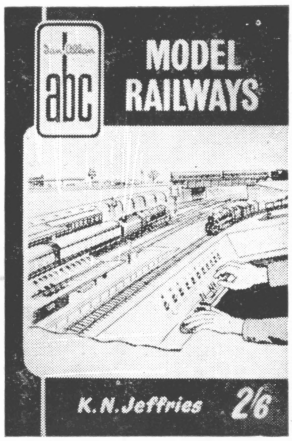

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